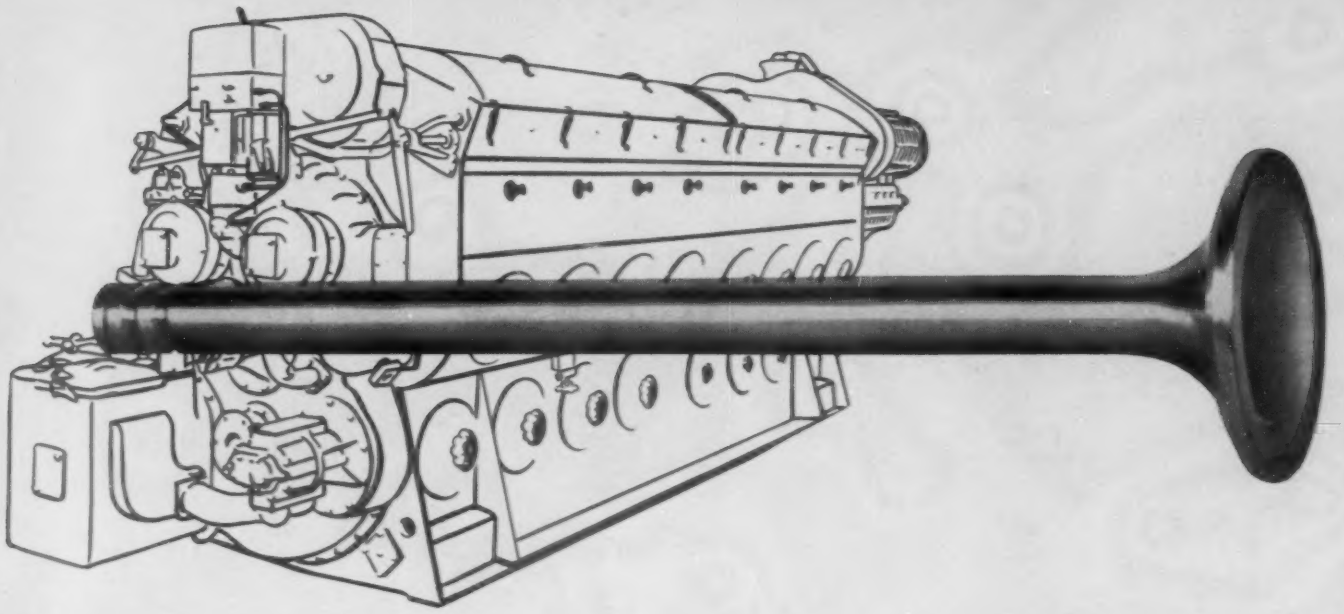
September 24, 1956

Car Reports in a Flash . . . p. 28

RAILWAY AGE

WORKBOOK OF THE RAILWAYS

THE INDUSTRY'S ONLY WEEKLY NEWSMAGAZINE



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GENERAL MOTORS LOCOMOTIVES

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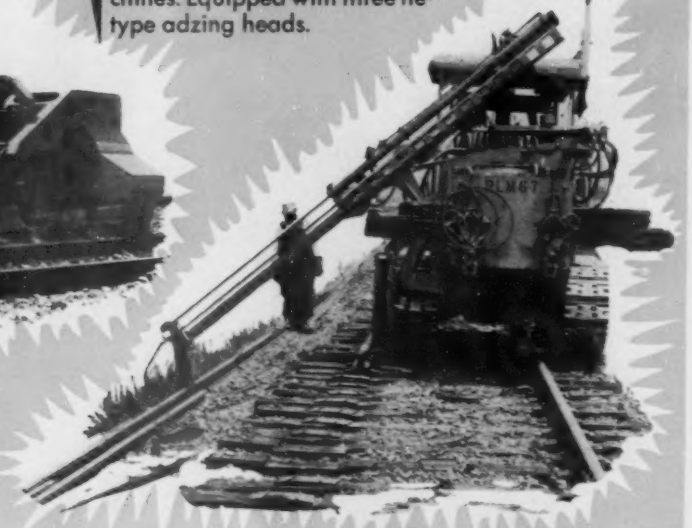
THE KERSHAW CRIB-ADZE – Cribs between ties and adzes ties in one operation, doing work normally requiring five machines. Equipped with three new type adzing heads.



THE KERSHAW RAIL RE-LAYER – Follows Crib-Adze, laying rail to gauge. Crane at rear of machine also may be used to set off smaller equipment.

Now . . . more than ever . . .

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MONTGOMERY ALABAMA

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That compact little stand presides at the throat of an industrial coal-handling yard. Dozens of times a day a loaded hopper car, moving by gravity, rolls into the throat with no regard to the setting of the switch points. And it passes smoothly through, without damage to car, switch or stand.

That's the kind of service for which the Bethlehem Model 22 Switch Stand was especially designed. Its powerful spring mechanism not only permits car wheels to move the points, but it actually "takes over" and completes the switch movement itself! It holds the points in the new position, turns the target to show the new indication, yet lets the throwing lever stay right as it was before the run-through.

Of course you can work the Model 22 by hand, just as readily as any other stand. This interchangeable operation makes the Model 22 railroading's most versatile switch stand. You needn't worry about maintenance either, for this tough little husky will take all the punishment you hand out, asking only for an oiling now and then.

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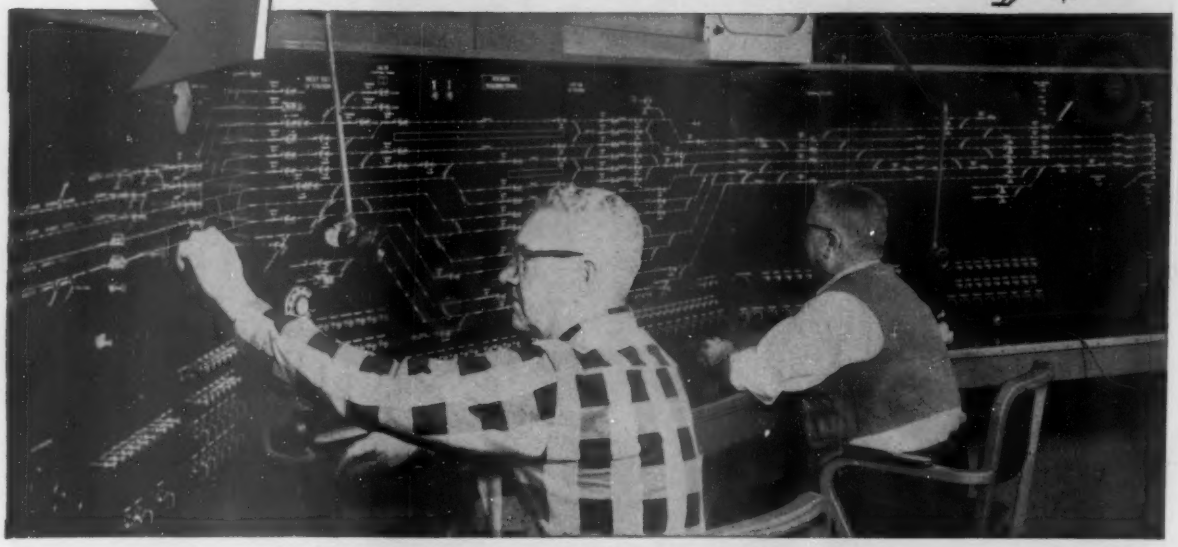
BETHLEHEM STEEL

UNION Route Interlocking handles 1750 lineups daily at New Haven



UNION Route Interlocking multiplies manpower—makes it possible for an operator to handle extremely large and busy areas.

The New Haven Railroad is consolidating control of nine new electric interlocking layouts, within 10 miles of New Haven, at one new UNION Route Control machine. A conservative count for the first four consolidated interlockings in service showed about 1,750 lineups daily—all controlled from the one push-button machine.

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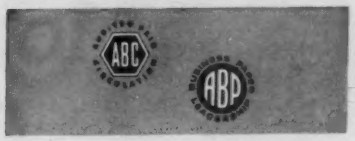

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Workbook of the Railways

Vol. 141, No. 13
September 24, 1956

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Few railroads follow suit . . .

. . . on New York Central's passenger station sale or lease plan but considerable sentiment is voiced in support of the objective—to cut passenger losses. One railroad president, however, called the NYC plan "another indication of the hodgepodge approach to this passenger problem." . . . p.6

The proposed census of transportation . . .

. . . would involve several interrelated surveys, including one of commodity distribution by land, air and water transportation. Cost of such a census is estimated at $1,200,000. It has been recommended that the Department of Commerce undertake the job and request necessary appropriations for the work. . . . p.7

FORUM: $5 million for advertising . . .

. . . is what the AAR should be spending each year. So says the Texas & Pacific's J. B. Shores in a significant analysis of a Railway Age editorial to the effect that the industry ought to go all out to cultivate a better public understanding of its critical competitive situation. . . . p.27

Car reports in a flash . . .

. . . will be available all over the New York Central, come October 1, as its Teletype-IBM hook-up reaches into the Northern district to bring the road's 67 yards into instant reach for relaying data. . . . p.28

Search for uranium . . .

. . . on the B&O didn't turn up any in significant quantities, to no one's great surprise, but it did prove the practicability of a technique for geological investigation of considerable potential importance in industrial development work. . . . p.31

Fuel car turnaround cut in half . . .

. . . is one profitable result of the installation by the ACL at Wilmington of fuel oil storage facilities that take in half a tanker load at a time and ship out 16 to 20 tank car loads daily. . . . p.32

Let the Bell System help you to more piggyback business

Up-to-the-minute communications help railroads take full advantage of expanding piggyback operations.

This means more efficient scheduling. Empty back-haul movements are eliminated or reduced. Interchange arrangements and interline service are speeded up. You get more use out of flat cars with tracings minimized.

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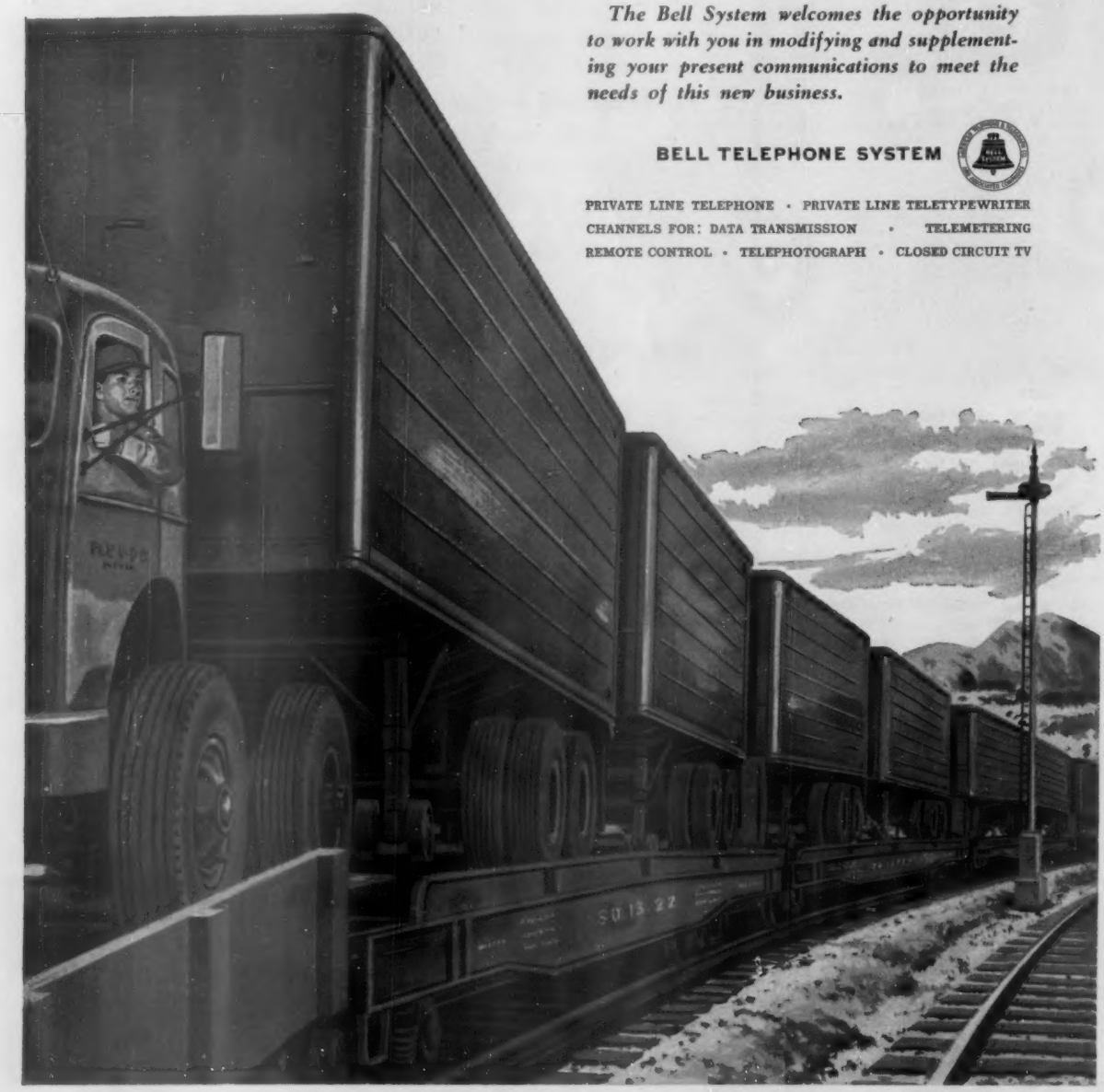

Current Statistics

Operating revenues, seven months	
1956	$6,046,938,511
1955	5,684,950,384
Operating expenses, seven months	
1956	$4,694,896,497
1955	4,298,655,712
Taxes seven months	
1956	$629,099,537
1955	613,575,909
Net railway operating income, seven months	
1956	$572,038,261
1955	623,003,094
Net income, estimated, seven months	
1956	$433,000,000
1955	488,000,000
Average price 20 railroad stocks	
September 18, 1956	95.74
September 20, 1955	98.47
Car loadings revenue freight	
Thirty-six weeks, 1956	25,703,532
Thirty-six weeks, 1955	25,480,883
Average daily freight car surplus	
Wk. ended Sept. 15, 1956	4,958
Wk. ended Sept. 17, 1955	5,430
Average daily freight car shortage	
Wk. ended Sept. 15, 1956	10,280
Wk. ended Sept. 17, 1955	12,552
Freight cars on order	
August 1, 1956	126,194
August 1, 1955	42,888
Freight cars delivered	
Seven months, 1956	38,533
Seven months, 1955	19,303
Average number railroad employees	
Mid-August 1956	1,036,854
Mid-August 1955	1,096,705

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Week at a Glance CONTINUED

New title: Road foreman-trainmaster . . .

. . . has come into use on several railroads. The duties and responsibilities of the job are outlined herein. . . . p.34

Job-rating of supervisors . . .

. . . is standard practice on the Canadian Pacific. The technique helps management to follow the development of men in their jobs and to select for advancement. . . . p.35

BRIEFS

Great Lakes iron ore shipments . . .

. . . so far this year are around 13 million tons behind the same date last year, as a result of strikes. Some steel men say substantial tonnages of ore from Canada and Venezuela may have to be moved by rail from Atlantic ports to the interior during the winter to meet the demand.

Railroads will receive about 4% . . .

. . . of the total expenditures contemplated under the long-range federal highway program, for transportation of materials and machinery, according to the calculations of a West Coast engineering consulting firm.

Congress is likely to act . . .

. . . on some parts of the Cabinet Committee Report in 1957 or 1958, according to predictions of persons conversant with the Washington legislative scene. They are careful to point out, however, that the type and amount of action taken may be largely governed by the outcome of the November elections.

Hearing on the proposed increase in demurrage . . .

. . . charges has been postponed by the ICC from October 15 until November 6. The postponement was at the request of the railroads which have now filed their petition asking the commission to lift the suspension and let the increases become effective while it proceeds to investigate them. The Commission also has the reply of the National Industrial Traffic League which opposes that course.

500-mile railroad rehabilitation . . .

. . . to cost $25 to $50 million, is being undertaken by a New York engineering firm, Brown & Blauvelt. Destroyed by Lawrence of Arabia during World War I, the railroad will run from Ma'an in Jordan to Medina in Saudi Arabia. Work is expected to be completed in about four years.

RAILWAY AGE
Workbook of the Railways

Will Station Sales Cut Costs?

New York Central's plan to sell or lease passenger terminals focuses railroads' attention on getting maximum use of facilities

A sampling of railroads by Railway Age indicates little activity in line with the New York Central's plan to sell or lease most of its passenger stations.

NYC President A. E. Perlman put 406 of the system's stations on the block for sale or lease last month as a means to trim passenger operating expenses. Some stations, such as New York's Grand Central Terminal and those not wholly owned by the Central, were excluded (Railway Age, Aug. 27, p. 8).

The road would lease back space needed to continue passenger operations, but, up to now, the Central has announced no developments as to bids received although it is understood some preliminary negotiations are under way.

Sentiment in support of the NYC plan was voiced by several roads, with a strong affirmative vote coming from the Pennsylvania—which also was in concert with the Central in their joint application with several other roads for 45% increases in first class passenger fares.

The PRR's R.C. Champlin, vice-president, public relations, said "we compliment Mr. Perlman on focusing attention not only on the New York Central's desire to secure revenue from the use of passenger stations for other than railroad purposes, but on the whole passenger problem. . . . To all of us handling public relations and publicity for the railroads, it indicates that just because something has been going on a long time is no reason why it cannot be dramatized."

Noting the varying use of "concessions" and current emphasis on "air rights," Mr. Champlin said that "dual uses of passenger locations for office buildings, supermarkets, filling stations, etc., will undoubtedly become more common in the years ahead. We have a number of these on the Pennsylvania and naturally expect to take advantage of every opportunity for increasing that number in the future."

A minority view was expressed by the president of one railroad who asked to remain anonymous. "It strikes me that the attitude of the New York Central is another indication of the hodgepodge approach to this passenger problem," he declared.

"With low level trains and high level trains, fare decreases in some points and a 45% increase in first class fares, we seem to be somewhat in the position of the farmer throwing mud at the barn. If the 45% increase in fares is granted," he asserted, "the chief attraction for these passenger stations might be for historical associations which would wish to preserve them as museums."

Joint ownership of terminals is cited by some roads as a deterrent to taking such a step as the Central's.

Louisville & Nashville President J. E. Tilford stressed that his road is "obligated to bear our share of the cost notwithstanding [the condition that] the amount of traffic handled by this railroad hardly justified the cost incurred" at union stations in Cincinnati, St. Louis and New Orleans.

Mr. Tilford mentioned L&N plans to sell the terminal at Lexington, Ky. —as others have been sold—because of the end of passenger service there. "There are doubtless some of our passenger stations that could be retired and sold to developers," he went on, adding that "I presume, where needed, space could be arranged and leased to the railroad with some economy in operation."

A midwestern road also reported its situation complicated by the joint use of most of the large stations it utilizes, noting it would require joint action to sell the depots. However, a spokesman for this road said consideration has been given to sale of air rights and to greater use of its own stations, steps which many other roads also favor.

The Chesapeake & Ohio, reporting "no specific plans" like the New York Central's, says it has "always been alert to take advantage of every opportunity to put unneeded passenger facilities to other productive

FOR SALE—this New York Central passenger station at Syracuse, N.Y.

uses." A C&O spokesman called attention to a project at Bay City, Mich., where a shopping center and bus depot were built on the site of the road's passenger station and freighthouse. A like development, he said, is under way at Saginaw, and others are planned for Flint, Muskegon and several other locations.

A combination hotel-shopping center-long distance depot is planned as a replacement for a New Haven commuter station at New Rochelle, N. Y., to be sold to developers.

While this is reportedly the only such undertaking it has "in the works," the New Haven focuses attention on the taxes railroads pay on their facilities and says that "if we could get private capital interested in taking over any more of our property, we'd be very happy to talk things over."

The door appears to be ajar in like manner on the Southern Pacific, whose C. E. Peterson, vice-president, system passenger traffic-public relations, said: "While we have no immediate overall plan for the sale of entire stations, Southern Pacific for some time has been exploring ways to make greater use of these and other properties through lease of whole stations or leases of space and concessions.

"With decreased use of stations for passenger traffic, we must make surplus space produce other income."

The Santa Fe's J. P. Reinhold, assistant to the president, public relations, said: "We have not followed the practice of selling any of our passenger facilities and then leasing space for continued passenger business, nor have we investigated such a plan."

Varying situations on different roads according to their own individual make-ups were pointed up as factors to be considered by spokesmen for the Seaboard Air Line, Atlantic Coast Line and the Monon.

Warren W. Brown, president of the Monon, noted that "most of the cities and towns we serve have ample room for industrial and suburban expansion in reasonably choice locations. For the most part our passenger stations would not prove to be attractive business sites." Mr. Brown also reported that the Monon had not tried any sale and lease-back deals and, while the road had tried to sell stations where service has been abolished, it has managed to rent only "two small ones."

R. J. Shinn, Jr., manager of public relations, ACL, said his road's situation just doesn't "parallel" the Central's. He said the Coast Line had expanded its freight space to absorb idle passenger facilities in some stations and added that in instances where passenger service fell off or was dropped, the passenger and freight agencies were combined. In such cases, he said, the passenger building was sold and removed for other railroad facilities or industrial development.

The Seaboard's C. E. Bell, vice-president, public relations, said the SAL has no stations which have more space than is needed for daily operations. He added that, "unquestionably, [Central's] plan has advantages in the case of certain lines but it is open to question whether a similar opportunity exists on the Seaboard."

Census Would Survey Flow of Commodities

Program before Secretary of Commerce Weeks contemplates gathering information on distribution of products by land, air and water transportation

The proposed 1958 Census of Transportation, which has been recommended to Secretary of Commerce Weeks, contemplates several interrelated surveys, including one of commodity distribution by land, air and water transportation.

This would be designed to obtain statistics from major classes of shippers showing the transportation and distribution of products by: (a) each class of carrier; (b) market channels; (c) major market areas served from leading production areas; (d) volume of interregional trade within United States by major classes of shipper and product.

Answers—The data would be expected to provide answers to several questions, including these: How is the product moved to market? How much moves by rail, truck, air and water? To what extent do shippers furnish their own transportation?

The recommendation went to Secretary Weeks as part of a report embodying a proposed program for the census (Railway Age, September 17, page 5). The program, endorsed by the under secretary of commerce for transportation, Louis S. Rothschild, was prepared by his staff under the general supervision of his assistant, Paul F. Royster, with technical assistance from Donald E. Church, chief, Transportation Division, Bureau of the Census.

The interrelated surveys, in addition to the commodity-distribution project, would cover: passenger travel by land, air and water; truck transportation inventory and utilization; bus transportation inventory and utilization; air cargo commodity movements; experimental surveys.

It is recommended that the Department of Commerce undertake the census and request necessary appropriations for the work. Legislation authorizing the department to take a transport census was enacted in 1948, but Congress has never appropriated any money for that purpose.

Estimated cost of the proposed census is given in the report as $1,200,000. This includes $500,000 for the commodity-distribution survey, $250,000 for the truck inventory and utilization survey, $150,000 each for the surveys of passenger travel and air cargo commodity movements, $100,000 for the bus inventory and utilization survey, and $50,000 for the experimental surveys.

The new data, when combined with existing data already being collected by other agencies, "should provide a greatly improved statistical coverage of transportation activities," Undersecretary Rothschild told Secretary Weeks in the letter with which he submitted the report. He also said the program was designed "to bridge a number of serious gaps now existing in available data."

Under present plans, general statistics gathered in the commodity-distribution survey would be shown for two classes of shippers—manufacturers and agricultural assemblers

—with detailed breakdowns separately for about 20 representative industry groups. In order to minimize the reporting effort, the basic data would be obtained by microfilming selected samples of sales invoices, or shipping documents, at the manufacturing and assembling establishments.

The passenger survey would obtain statistics showing the volume and character of the travel market by: (a) means of transportation; (b) national and regional areas; (c) length and frequency of trips, primary purpose of trip, and income and occupational status of passenger.

The truck inventory and utilization survey would cover characteristics of the truck fleet, i.e., number of vehicles, classified by weight, body type, age, annual mileage, occupational use, number of private and for-hire fleets by number and kind of vehicles. It would also cover the capacity and utilization of the truck fleet and the amount and nature of service performed by trucks operated by commercial carriers, both as measured by tons carried and ton-miles of service. The bus survey would cover characteristics of the bus fleet, and characteristics of the bus industry. The air cargo survey would cover; (a) volume of air cargo by classes of commodities; (b) volume of air cargo moving on specific major routes, and the kinds of movements on minor routes; (c) volume of interregional air cargo traffic; (d) distribution of air cargo by straight-line distance, by class of commodity, size of shipments and revenue; (e) volume and revenue by major commodity class by type of carrier.

Uses for Data—The report includes a discussion of possible uses for the transport data. There it is stated that the information would be of value to the government, industry, and the carriers. More specifically, the report said the Commerce Department's Transportation Council could have used such information in connection with studies it has made.

The studies were identified as those relating to the Interstate Commerce Act's so called agricultural exemptions, the excise taxes on transportation, federal aid to airports, the railroad passenger deficit, the desirability of repealing or modifying the IC Act's section 4, the small-shipments problem, the proposal for a single federal regulatory agency, "piggyback" service, relative advantages and need for common, contract and private carriers, and the desirability of a less restrictive policy on integration of different types of common carriers.

Capital Outlays Head for 4-Year High

Reports to ICC indicate that 1956 total will be $1.3 billion, up 44% from 1955—First half's expenditures were up 62%

Class I line-haul railroads expect to make gross capital expenditures this year in excess of $1,309,000,000, which would be a four-year high. It would be the first billion-dollar year since 1953's $1,260,000,000, and it would approach 1952's $1,341,000,000.

The 1956 estimate was reported by the ICC's Bureau of Transport Economics and Statistics in its "Transport Economics." It was based on actual outlays made by the 113 reporting roads during this year's first half, and estimates for the second half submitted by 108 roads. The five roads which failed to submit estimates made expenditures totaling $12.5 million in the first half.

As shown in the accompanying table, the expenditures for this year's first half were 62.2% above those of the like 1955 period. That reflected increases of 76.9% in expenditures for equipment, and 33.2% in outlays for road facilities.

ACTUAL AND ESTIMATED GROSS CAPITAL EXPENDITURES OF CLASS I RAILROADS[1]—1955-56

Period	Number of roads	Road Thousands	Equipment Thousands	Total Thousands
Actual 1955:				
1st half	126	$128,788	$255,150	$383,938
2nd half	126	211,321	313,184	524,505
Year	126	340,109	568,334	908,443
Actual 1956:				
1st half	113	171,496	451,280	622,776
Estimated 1956:				
3rd quarter	[2]108	136,708	197,246	333,954
4th quarter	[2]108	124,057	228,348	352,405
2nd half	[2]108	260,765	425,594	686,359
Total: 1956 actual and estimated	..	432,261	876,874	1,309,135
Per cent of change:				
1st half 1956 vs. 1st half 1955	..	+33.2	+76.9	+62.2
2nd half 1956 (Est.) vs. 2nd half 1955	..	+23.4	+35.9	+30.9
Year 1956 (actual and estimated) vs. 1955	..	+27.1	+54.3	+44.1

[1]Effective January 1, 1956, Class I railroads are those with annual gross operating revenues of $3,000,000 or more; prior to that date this class included carriers with revenues above $1,000,000. Comparisons of the 1956 figures with those of 1955 are not materially affected, however, since gross capital expenditures of carriers which changed class amounted to only 0.1% of the total in 1955.
[2]Estimates not furnished by five roads.

PRR to Staff Parlor And Parlor-Lounge Cars

Effective October 1, the Pennsylvania will take over the staffing of all parlor and parlor-lounge cars on its lines, heretofore staffed by the Pullman Company. Under the new plan, tickets which cover both rail transportation and seats in the cars will be collected by railroad trainmen, and patrons will be served by parlor car attendants employed by the railroad.

Nuclear Locomotive Considered Unlikely

Early advent of an atomic-powered locomotive is "possible, but very doubtful" Dr. Lauchlin M. Currie, vice-president, Union Carbide Nuclear Company, told the New York Traffic Club September 11.

Endorsing previous statements by other authorities that production and operating costs of a nuclear locomotive would be prohibitive, Mr. Cur-

(Continued on page 10)

RAILWAY MARKET OUTLOOK THIS WEEK

a RAILWAY AGE Workbook Page

Carloadings Up.—Loadings of revenue freight in the week ended September 15 totaled 820,666 cars, the Association of American Railroads announced on September 20. This was an increase of 141,055 cars, or 20.8%, compared with the previous holiday week; an increase of 3,432 cars, or 0.4%, compared with the corresponding week last year; and an increase of 109,438 cars, or 15.4%, compared with the equivalent 1954 week.

Loadings of revenue freight for the week ended September 8 totaled 679,611 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS

For the week ended Saturday, September 8

District	1956	1955	1954
Eastern	105,307	106,309	92,752
Allegheny	133,775	137,330	107,502
Pocahontas	53,495	52,557	40,741
Southern	109,906	110,167	103,322
Northwestern	111,140	129,079	97,924
Central Western	115,267	114,281	108,276
Southwestern	50,521	52,269	51,008
Total Western Districts	227,328	295,629	257,208
Total All Roads	679,611	701,992	601,525
Commodities:			
Grain and grain products	43,766	45,757	44,569
Livestock	10,494	8,948	10,223
Coal	121,265	116,661	98,553
Coke	11,142	11,747	6,662
Forest Products	38,666	40,303	34,750
Ore	71,450	87,290	52,930
Merchandise l.c.l.	52,542	53,886	53,736
Miscellaneous	330,286	337,400	300,100
September 8	679,611	701,992	601,552
September 1	784,366	789,722	688,492
August 25	770,413	787,272	676,698
August 18	756,624	775,701	678,624
August 11	715,236	770,251	685,272
Cumulative total, 36 weeks	25,703,532	25,480,883	23,132,034

In Canada.—Carloadings for the ten-day period ended August 31 totaled 145,640 cars, compared with 93,866 cars for the previous seven-day period according to the Dominin Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
August 31, 1956	145,640	47,874
August 31, 1955	134,885	45,867
Cumulative Totals:		
August 31, 1956	2,928,577	1,167,193
August 31, 1955	2,636,301	1,079,885

New Equipment

FREIGHT-TRAIN CARS

► *Prices Going Up.*—Current prices for various types of freight cars are about 2% to 10% higher than before the recent steel strike; the higher prices reflect increased costs of labor and steel.

► *August Deliveries Up, Orders Down.*—New freight cars delivered in August totaled 5,364, compared with 5,344 in July and 3,480 in August 1955, ARCI and AAR report; orders were placed in August for 2,575 cars, compared with 2,642 in July and 13,405 in August 1955; September 1 backlog was 122,870, compared with 126,194 on August 1 and 52,803 on September 1, 1955.

Type	Ordered Aug. '56	Delivered Aug. '56	On Order Sept. 1, '56
Box—Plain	52	2,579	41,536
Box—Auto	0	0	2,100
Flat	16	203	4,881
Gondola	25	205	12,488
Hopper	306	1,007	38,792
Covered Hopper	952	332	6,689
Refrigerator	300	391	5,758
Stock	0	0	0
Tank	924	599	7,742
Caboose	0	24	145
Other	0	24	2,739
TOTAL	2,575	5,364	122,870
Car Builders	2,486	2,783	58,716
Company Shops	89	2,581	64,154

► *American Refrigerator Transit Co.*—Ordered 300 standard refrigerator cars, Pacific Car & Foundry; estimated unit cost $13,000; 50 cars will be equipped with beef rails; delivery expected third quarter 1957.

► *Butte, Anaconda & Pacific.*—Ordered 200 75-ton flat-bottom ore cars, Pullman-Standard; estimated cost $2,000,000; delivery expected second quarter 1957.

► *Gulf, Mobile & Ohio.*—Ordered 600 freight cars at cost exceeding $5 million; included are 250 box cars to be built by Pullman-Standard; 100 covered hopper cars, Greenville Steel Car; and 250 wood rack cars, GM&O Meridian, Miss., shops.

► *Lake Superior & Ishpeming.*—Ordered 200 70-ton ore cars, Bethlehem Steel; cost $1,600,000; delivery scheduled for second quarter 1957.

► *Rutland.*—Ordered 25 70-ton gondola cars and 50 50-ton box cars, Pullman-Standard; gondola cars, to cost $206,125, are scheduled for delivery in June 1957; box cars, costing $365,750, will be delivered in July 1957.

PASSENGER-TRAIN CARS

► *Baltimore & Ohio.*—Ordered two trains, each consisting of three rail diesel cars, from Budd Company; trains will go into Philadelphia-Pittsburgh service beginning October 28 (see page 11.)

(Continued from page 8)
rie said "electric power from nuclear sources is no more likely to promote railroad electrification than does our present electrical system."

As to the possibility that expansion of nuclear power would reduce railroad coal traffic, Mr. Currie said he felt nuclear power would only supplement existing sources of energy for many years, particularly as needs for energy soar.

However, he said that "changes in coal haulage patterns are much more likely to come about because of relocation of coal-burning electric burning power stations near coal mines, or along water routes, or because of conveyance of coal by pipe or belt line."

Eastern, Western Roads Seek Rate Hike

Eastern and western railroads agreed last week to seek a general freight-rate increase of 15% with the usual hold-downs. The agreement was announced September 18 after a Washington, D. C., meeting at which southern roads declined to join in the proposal at this time.

The announcement was made by E. V. Hill, chairman of the Traffic Executive Association, Eastern Railroads, and H. C. Barron, chairman, Executive Committee, Western Traffic Association. They said a formal petition would be filed with the Interstate Commerce Commission as soon as possible.

Wide Study—It will request the commission to institute an investigation into the adequacy of earnings and the general revenue situation of "all railroads in the country." Presumably the way would thus be prepared for the southern roads to enter the case before a decision is reached.

A 15% increase applicable to all roads and with the usual hold-downs would yield something like $1,150,000,000 on the basis of present traffic. The hold-downs will be on fresh fruits and vegetables, frozen foods and concentrates, canned goods, lumber and sugar. Coal also would get exceptional treatment, the proposed increase there being five cents per net ton on coal and coke, except that moving to ports for export.

"These increases are necessary," the Hill Barron statement said, "to meet recent increases in the cost of materials and supplies, and to assure the carriers sufficient revenue to permit necessary improvement in both rights of way and equipment."

Procedure—The proposed commission investigation of the earnings situation marks a return to procedures employed in all general rate cases of recent years except the latest —Ex Parte 196. There the railroads filed the rate-increase tariffs, and the commission set up expedited procedures out of which came its determination not to suspend the increase.

However, it did not approve the tariffs with their proposed increase of 7% across-the-board. Thus new tariffs had to be filed hurriedly to publish the authorized increase of 6% with hold-downs, which became effective last March 7. The type of proceeding to which the railroads have now returned is that wherein the commission is asked, in effect, to give assurance that tariffs publishing the proposed increases would not be suspended.

Opening Signal for CSS&SB's New High-Speed Line

J. Samuel Hartt (center), president of the Chicago South Shore & South Bend, signals the opening of the road's new multi-million dollar Hammond-East Chicago-Gary track relocation last week (Railway Age, Nov. 9. 1953, p. 12). The new rail line and the Northern Indiana toll road occupy a common elevated grade throughout the line's five-mile length. CSS&SB trains have been removed from the streets of East Chicago, and nine railroad grade crossings and 23 street crossings have been eliminated. South Shore expects the new route to cut 10 minutes from passenger schedules and 20 minutes from freight schedules. Witnessing dedication (left to right from Mr. Hartt) are: W. M. Jeorce, mayor of East Chicago, Ind.; E. C. Dowling, mayor of Hammond; G. Chacharis, controller of Gary; B. T. Wilson, president of the Gary City Council; and C. H. Jones, vice-president and general manager of the railroad.

ICC Dismisses Fresno Passenger Terminal Case

The Interstate Commerce Commission has dismissed, for want of prosecution, the application whereby the city of Fresno, Calif., sought to have the Santa Fe abandon its line into the city and acquire joint use of Southern Pacific trackage there.

The application was filed in 1954 in connection with plans for the elimination of grade crossings and construction of a new passenger station. It asked the commission to find that public convenience and necessity permitted the proposed abandonments and joint-use arrangements.

Hearings in the case were held last fall, but adjourned at the request of the city. Since that time, as the commission's dismissal order put it, the city "has taken no further action . . . for a period of more than seven months, notwithstanding that the

SP TO SELL AIR LINE TICKETS

The Southern Pacific will begin selling tickets and making reservations for United Air Lines on October 1. A joint announcement last week by SP and United said the air line tickets will be sold in about 130 rail station ticket offices in California, Oregon and Nevada.

Air line tickets will not be sold at SP offices in larger cities, C. E. Peterson, SP vice-president system passenger traffic — public relations, explained. Flight information as well as reservations and tickets will be provided by SP stations which are linked with the railroad's central reservations bureaus in San Francisco, Los Angeles and Portland.

"This new relationship between two major companies and different fields of transportation presents a real milestone in the transportation field," Mr. Peterson declared. "We sense it is a good example, too," he added, "of broadminded cooperation between two forms of transportation to better serve the public interest."

matter has been called to its attention informally from time to time." The commission had previously denied Santa Fe and SP motions asking that the application be dismissed for want of jurisdiction.

11 Roads Paid August Fines Totaling $9,300

Eleven railroads in August paid fines totaling $9,300, plus costs, on 93 counts of violating the Safety Appliance Acts, the Accident Reports Act, and the Signal Inspection Law.

This was reported by the ICC, which also reported that largest amount, $2,600, was paid by the Erie for 26 violations of the Accident Reports Act. Next, in turn, came $1,600 paid by the Missouri Pacific and $1,400 paid by the Southern Pacific for 16 and 14 violations, respectively, of the Safety Appliance Acts.

Goodyear Is GSA's New Transport Chief

C. J. Goodyear, who retired recently as traffic manager of the Reading Anthracite Company, has joined the staff of General Services Administration as commissioner of its Transportation and Public Utilities Service. He succeeded Herbert K. Hyde, who resigned to enter the private practice of law.

The service is GSA's traffic management unit which establishes transportation policies for civilian agencies of the federal government. It also represents those agencies in rate cases before regulatory bodies.

Mediation Board Enters BLF&E Case

Negotiations between the Brotherhood of Locomotive Firemen & Enginemen and the nation's railroads deadlocked in Chicago September 14 when union representatives walked out of the discussions.

Both sides last week invoked the services of the National Mediation Board. The BLF&E is demanding a $3 a day pay increase and a company-financed medical benefit plan.

Meanwhile, negotiations between the Brotherhood of Railroad Trainmen and the railroads are progressing on an industry-wide scale (Railway Age, Sept. 10, p. 11). Continuous sessions have been held since the negotiations began several weeks ago. BRT wants a $3 a day increase plus a $2.50 increase for short turnaround service.

Another Development—Industry-wide negotiations got under way between the Switchmen's Union of North America and the railroads on September 12 (Railway Age, Aug. 6, p. 7). SUNA is demanding a 25% pay increase, plus paid holidays.

Non-operating unions and the railroads started industry-wide negotiations in Chicago last week. Balloting on the strike proposal reported in Railway Age, Aug. 20, p. 5, has been completed, although the vote tally had not been announced as this issue went to press. The "non-ops" are demanding a 25% pay boost.

The Brotherhood of Locomotive Engineers and the Order of Railroad Conductors & Brakemen are still negotiating on an individual carrier basis.

B&O Orders Two 3-Car RDC Trains

The Baltimore & Ohio has ordered two new trains from the Budd Company for an all-daylight service, to begin October 28, between Philadelphia, Baltimore, Washington and Pittsburgh. Each train will consist of three rail diesel cars with a passenger capacity of over 200.

The new trains—to be called the "Daylight Speedliners"—will make the 435-mile run in each direction on an 8½ hr schedule. The schedule is based on experience gained during last year's Washington-Chicago test run of a three-car RDC train on the B&O (Railway Age, May 16, 1955, p. 178, and June 6, 1955, p. 3).

Each train will have a tavern car, offering economy meals and refreshments. The new "Daylight Speedliner" will replace the present Washingtonian," a standard heavyweight passenger train operating between Baltimore and Cleveland. Additional cars may be added to the train if the traffic demand is sufficient.

Unions Seek Dismissal Pay from C&NW

Eleven unions representing up to 16,000 Chicago & North Western and Chicago, St. Paul, Minneapolis & Omaha employees are taking strike ballots to back up their demands for severance pay equal to the employee's previous total compensation.

Under the proposal, an employee who has had five years of service with an average pay of $4,000 per year would collect $20,000 severance pay.

The unions also are demanding that if an employee's position was abolished on or after April 1, 1956, and the employee is required to exercise seniority and take a job at a lower rate of pay, "they shall be paid for a period equivalent to their years, months and days of service . . . the difference between the rate of the position they held on March 31, 1956, and the rate of the position they acquire." Employees displaced in sequence would obtain like protection.

Employees transferring from one location to another should have their

household effects moved by the railroad and they should receive living expenses for 30 days "to give them an opportunity to get located," the proposal further stated.

C&NW has rejected the demands claiming, among other things, that the Railway Unemployment Insurance Act provides for the employees furloughed by the two roads' streamlining program. The road also said it does not believe this case comes under the Washington agreement because two separate carriers have not coordinated their facilities.

The National Mediation Board entered the dispute last week, meeting separately with the Chicago & North Western and union representatives.

NYC Has New Passenger Service Idea

The New York Central's new fall schedules, to become effective October 28, "are based on more than 24 months of market research into what the traveler wants," Ernest C. Nickerson, vice-president—passenger sales and service, said when announcing the new timetables.

Mr. Nickerson, discussing what he called the NYC's "new passenger service concept," said it is based on a four-point program, of which the new fall schedules are the first phase.

The new schedules, Mr. Nickerson added, "will offer a better selection of fast trains at popular departure times with convenient arrivals." Running times of many existing trains have been speeded up through elimination of seldom-used stops, and several fast new trains have been added. Departures have been arranged generally so that patrons are offered the choice of early morning, noon, early evening and night trains between major points.

The other three phases of the new passenger service concept—which will be introduced on the railroad as development warrants — include a long-range program of redesigning passenger equipment to meet the comfort and convenience requirements for short, medium and long-distance travel. The NYC also is studying new methods and procedures to make it easier to buy tickets, make reservations and obtain information.

Lastly, the road's long-range program to develop and service its passenger business will be backed by an aggressive merchandising campaign using the latest techniques of research, marketing and sales.

The entire program is based upon the results of the vast market research project, which was undertaken to determine on the Central's system the quantity of travel, type of travel preferred, flow patterns, and departure and arrival time preferences.

Where previously each passenger train has attempted to serve some seven purposes—such as handling mail, express, baggage, operating needs, and short, medium and long-distance passengers—under the new schedules the primary concern will be the convenience to passengers. In many instances, separate trains will be operated to accommodate mail, express and baggage.

IC Opposes NYC Chicago Station Shift

New York Central's just-announced plans to consolidate most of its Chicago passenger operations at LaSalle Street Station next January 4 face legal opposition from the Illinois Central.

The IC filed suit last week to restrain the NYC from shifting its Michigan Central trains away from Central Station. The suit was filed shortly after D. A. Fawcett, NYC resident vice-president at Chicago, had announced the proposed change.

"All of the Michigan Central-Northern District passenger trains to Detroit now operating out of Central Station (IC Depot) will be shifted to LaSalle Street Station," Mr. Fawcett said. This would leave only the NYC's Big Four passenger trains using Central Station.

"Integration of stations will give a more efficient, economical service," Mr. Fawcett said. "The present situation confuses the traveling public and is costly duplication of services. This is especially true since excessive terminal costs are already strangling the nation's railroads."

The IC's counter-action to the NYC move was the suit filed last week in the Circuit Court of Cook County, Ill. The road will seek to enforce a succession of joint facility contracts under which the MC has used the IC tracks and station in Chicago for 104 years.

Memorial to a Builder

Wayne Johnston, president of the Illinois Central, examines a memorial to Roswell B. Mason, builder of the railroad's charter lines. The memorial was dedicated at Mason, Ill., last week to commemorate the 100th anniversary of completion of the IC's original 705-mile charter system.

REVENUES AND EXPENSES FOR JULY AND 7 MONTHS

CLASS 1 RAILROADS—UNITED STATES

	Month of July 1956	1955
Total operating revenues	$ 807,640,567	$ 849,623,503
Total operating expenses	654,404,870	644,435,557
Operating ratio —percent	81.03	75.85
Taxes	70,022,843	90,125,013
Net railway operating income (Earnings before charges)	61,432,982	92,546,200
Net income, after charges (estimated)	43,000,000	71,000,000
	Seven Months ended July	
Total operating revenues	$6,046,938,511	$5,684,950,384
Total operating expenses	4,694,896,497	4,258,655,712
Operating ratio —percent	77.64	75.61
Taxes	629,099,537	613,575,909
Net railway operating income (Earnings before charges)	572,038,261	623,003,094
Net income, after charges (estimated)	443,000,000	488,000,000

The IC suit contends that the proposed action of the NYC would throw many employees out of work, would disrupt present train connections at Central Station, Woodlawn and Kensington, and would leave the IC with a station larger than necessary for its own trains.

The threatened financial loss to the Illinois Central was set at approximately $500,000 a year, including the Michigan Central's share of the cost of operating the station and the MC's use of IC tracks between Central Station and Kensington (115th street).

Genet Foresees End of Rail Travel

Predicting a billion dollar a year business for the bus industry—its equipment transformed into "picture windows on wheels"—the president of the Greyhound Corporation has prophesied that railroads will be practically out of passenger operations by 1966.

Arthur S. Genet, former traffic vice-president of the Chesapeake & Ohio, said he could not "help but notice the expressions by various thinking transportation people that the railroad industry . . . should now be restricted to the hauling of heavy density volume freight."

Addressing the convention of the National Association of Motor Bus Operators at Chicago, Mr. Genet credited the railroads with "an important part in the early growth of our country" and "sizable contributions to the welfare and security of the nation." But, on the basis of expected advances in motor transport technology and expanding and improving highway networks, Mr. Genet foresaw bus lines doubling their business and the number of communities they serve. He predicted they will attract passengers not only from railroads but from air lines and from among those who now travel in private automobiles.

Noting that "railroads have embraced with great joy" the Cabinet Report, "particularly" its recommendations for equalizing competitive opportunities, Mr. Genet declared: "This same good basic American philosophy should hold true in the transportation of persons.

"It is unthinkable," he went on, "that progress should be thwarted by an unsound approach in one field of transportation. . . . Those who are charged with the administration and regulation of transportation for the security and well-being of the country are duty-bound to give full consideration to what is the proper arm of transportation to do the job."

Earlier he had assailed the ICC *(Continued on page 38)*

Railroading

After Hours

by James G. Lyne, Editor, Railway Age

Vigilance

J. W. Myers, retired Rock Island superintendent, writes from Florida to comment on the report here (September 10)—of an instance of inconsiderate treatment of passengers by train employees. Mr. Myers believes the remedy lies in more vigilance by supervisory forces, and more by higher management, to make sure that the supervisors are everlastingly on the job, riding trains.

The fact remains, though, that most railroad passenger service is high in quality and most employees are alert and courteous—that's what makes the exceptions so conspicuous. Since these exceptions have a way of occurring more on some roads than others, improvement is possible.

Any More "Zulu's"?

I wonder if there's any part of the country where "zulu's" ("emigrants' removables," or something like that, I believe, was their official designation) are still being operated. Before World War I there used to be a lot of these movements, at least on the roads West of the Mississippi; and probably in a lot of other places.

Here would be a farmer, with his livestock in one end of a box car and his household goods and implements in the other end, and the farmer parked on an army cot between the doors. A lot of stories of good and bad luck these fellows could usually tell, too.

I tried to find "emigrants' removables" in the 1955 commodity statistics, but had no luck. Possibly they've found a quicker way to move, now. Incidentally, why did they ever get to calling them "zulu's"?

Fare Controversy

From observation out on the road, I'd say there's no hotter subject among railroaders right now than the effort of several railroads to get a big increase in first-class fares. A lot of railroad people tell me they are heartily in agreement with John Budd's speech to the ticket agents, reported in our September 10 issue. But, also, a lot of them are quite sympathetic with the large passenger-carrying railroads—with whom this problem is acute.

When the New York Central, on September 10, announced its plan to ask for a large increase in commuter fares, the announcement was accompanied with a detailed and persuasive outline of the reasons. The public's reception of the bad news appeared to be much less critical than was most of the comment on the first-class fare plan.

From what I hear on "both sides," I'd say the two camps on the question of passenger fares are much closer together in their basic understanding of the problem than either of them may suspect. On a road where passenger train-miles are half of the total, the problem is bound to be more acute than where the ratio is a third or less.

BEFORE This 44-ton G-E locomotive was hit by a loaded 20-ton sand truck. A G-E Rebuild Specialist makes a detailed check of the damage prior to starting rebuild operations in General Electric's Locomotive Rebuild Center, Erie, Pa.

How General Electric's Rebuild Service

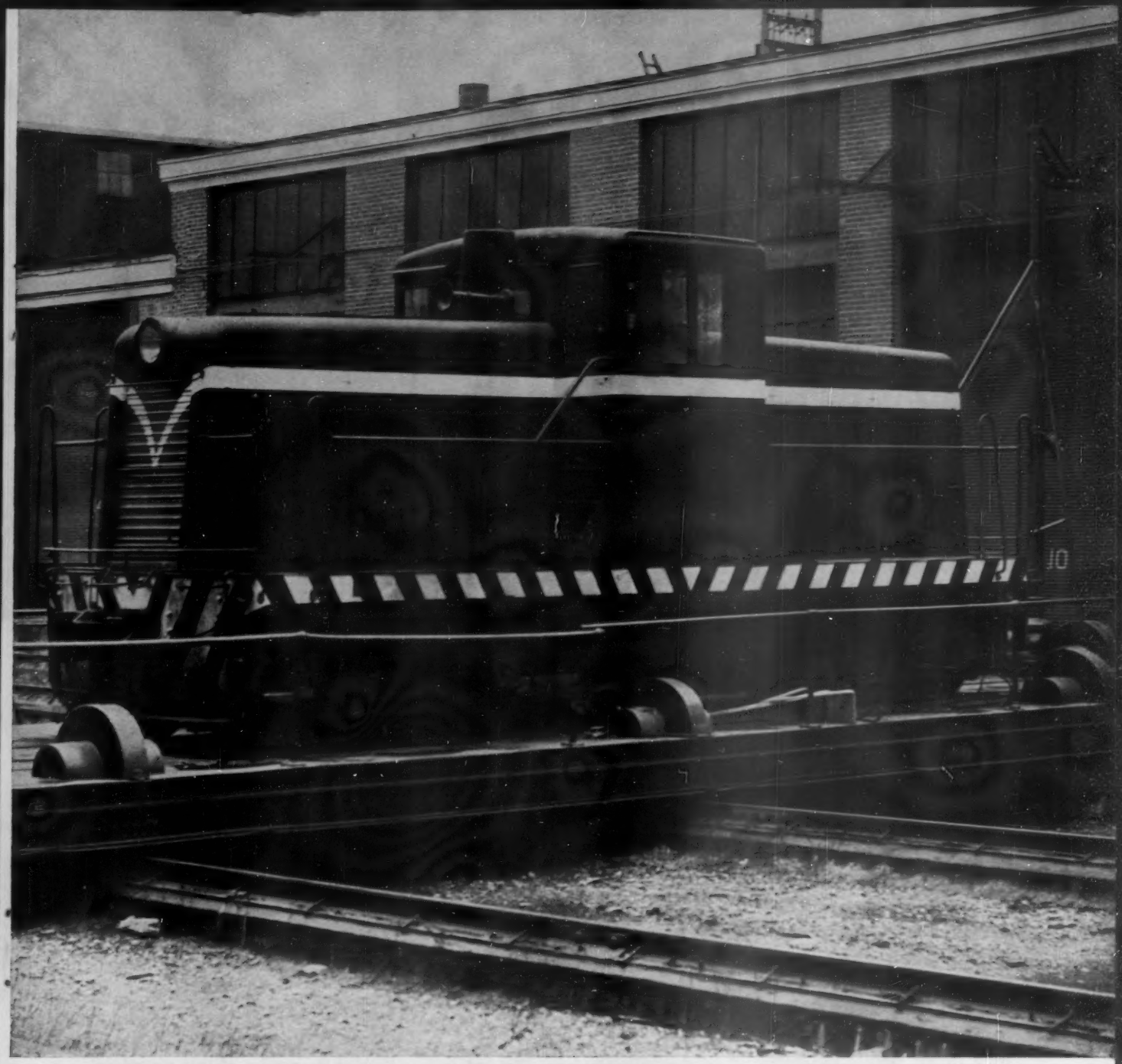
Recently, a short-line railroad owner wanted his wrecked locomotive rebuilt and back on the road as soon as possible and at a reasonable cost. Complete dependability after rebuild was also an important factor since the road owned only a few locomotives. He decided to use General Electric's Locomotive Rebuild Service.

The locomotive, a G-E 44-tonner, had been hit by a 20-ton truck loaded with sand. There was extensive structural damage and sand from the collision had entered many of the locomotive's precision-running parts.

The locomotive was completely disassembled. Structural damage was repaired. Every moving part was carefully cleaned and inspected. All damaged pieces were either rebuilt to factory specifications or were replaced with brand-new G-E parts.

Only five weeks after the 44-tonner arrived in Erie, it was ready to be returned to the customer. It looked and operated like new with a new locomotive warranty. The cost—only a fraction as much as replacement with a new locomotive.

Your G-E diesel-electric rebuild requirements may never include rebuilding a wreck. But this is only one



AFTER Only five weeks later, the same locomotive is literally "as good as new." The rebuilding cost was only 30% of the replacement value of the damaged locomotive, and General Electric backed up their work with a new locomotive warranty.

Gave This Wreck New Life in Only 5 Weeks

small phase of G.E.'s Rebuild Center operations. Your work-worn G-E locomotives can be given new life and brought up to the most modern standards of performance and economical maintenance through G.E.'s popular rebuild service.

Contact your nearest G-E Apparatus Sales Office for complete Overhaul-Rebuild information. A G-E engineer will be glad to give you an estimate, at no cost or obligation. General Electric Company, Locomotive and Car Equipment Department, Erie, Pa. 128-29

Progress Is Our Most Important Product

GENERAL ELECTRIC

Questions and
of current interest

Answers
to the Transportation Department

Occasionally a car is spotted on consignee's tracks for unloading, and thereafter it develops that the car must be unloaded from the side opposite that spotted. What is the proper application of the demurrage rules in such a case? That is, who was responsible for faulty placement . . .

?

Notation on waybill would help.

We gave an answer to this question in the June 4 column. The gist of it was a recommendation of the AAR committee on demurrage and storage that: (1) if the car were properly placarded by the shipper to show unloading from one side only "there has not been a proper actual placement until such placement has been made"; (2) when car is improperly placarded or not placarded at all there is no liability on the railroad's part.

We recently received a letter which makes some recommendations designed to eliminate the possibility of such improper placement. W. E. Robertson, Jr., assistant superintendent transportation, Norfolk & Western, writes as follows:

"Would it not simplify matters and better insure correct placement initially if, in addition to the placards on the sides of car, the bill of lading and waybill accompanying car carried appropriate notation with relation to the 'B' end of the car, similar to the following: 'Car to be spotted for unloading with brake end to the west, unloading side to the north,' assuming that the unloading dock at destination is north side of car with the 'B' end to the west and the car is appropriately placarded?"

Would some sort of notation on the waybill help this situation, which apparently is fairly serious?

We'd be glad to have your opinions, with or without use of your name.

—G.C.R.

About two years ago the waybill form was changed to permit placing of "stop-off" information in what was considered to be a more visible spot on the form. It was thought that this would help reduce the number of cars being carried by stop-off points. Has the change helped better the situation . . .

?

Yes.

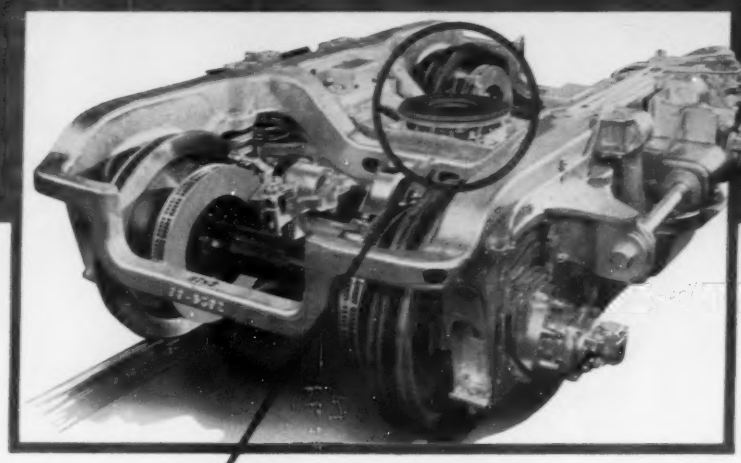
"There is no question whatsoever but what this change resulted in eliminating a lot of failures. However, we did not derive as much benefit from the change as most other railroads due to the fact that we had been billing all of our own business in the same manner for many years."—*L. V. Anderson, assistant to vice-president claim prevention, refrigerator and merchandise service, Chicago, Milwaukee, St. Paul & Pacific.*

"It is the general consensus of the accounting and claim departments, as well as the transportation and operating departments, that the changes were beneficial. Mechanically the form is superior to past methods, but we still do have trouble with the human element in correctly preparing the documents."—*L. McLean, supervisor of station service, Northern Pacific.*

"We have noticed a decided decline in the number of cars carried by stop-off points since the change was made in waybill form."—*H. H. Wills, superintendent stations and claim prevention, Missouri Pacific.*

CONDUCTED By G. C. RANDALL, district manager, Car Service Division (ret.), Association of American Railroads, this column runs in alternate weekly issues of this paper, and is devoted to authoritative answers to questions on transportation department matters. Questions on subjects concerning other departments will not be considered, unless they have a direct bearing on transportation functions. Readers are invited to submit questions, and, when so inclined, letters agreeing or disagreeing with our answers. Communications should be addressed to Question and Answer Editor, Railway Age, 30 Church Street, New York 7.

Passengers buy riding comfort...



provide
a more comfortable ride
and increase your revenue

with Commonwealth Central Bearings*

- **eliminate lateral shimmy**
- **increase wheel mileage**
- **reduce operating costs**

for existing or new equipment

Now . . . a dynamic development that goes after increased revenue with the benefits rail passengers are looking for! Passengers buy *comfort* . . . and you can give them more of it with *Central Bearings*.

Central Bearings offer a simple, positive way to provide smoother, more comfortable riding of *existing* passenger cars, and the best in travel comfort for your new equipment. They have proven themselves on hundreds of cars . . . and are on order for many more.

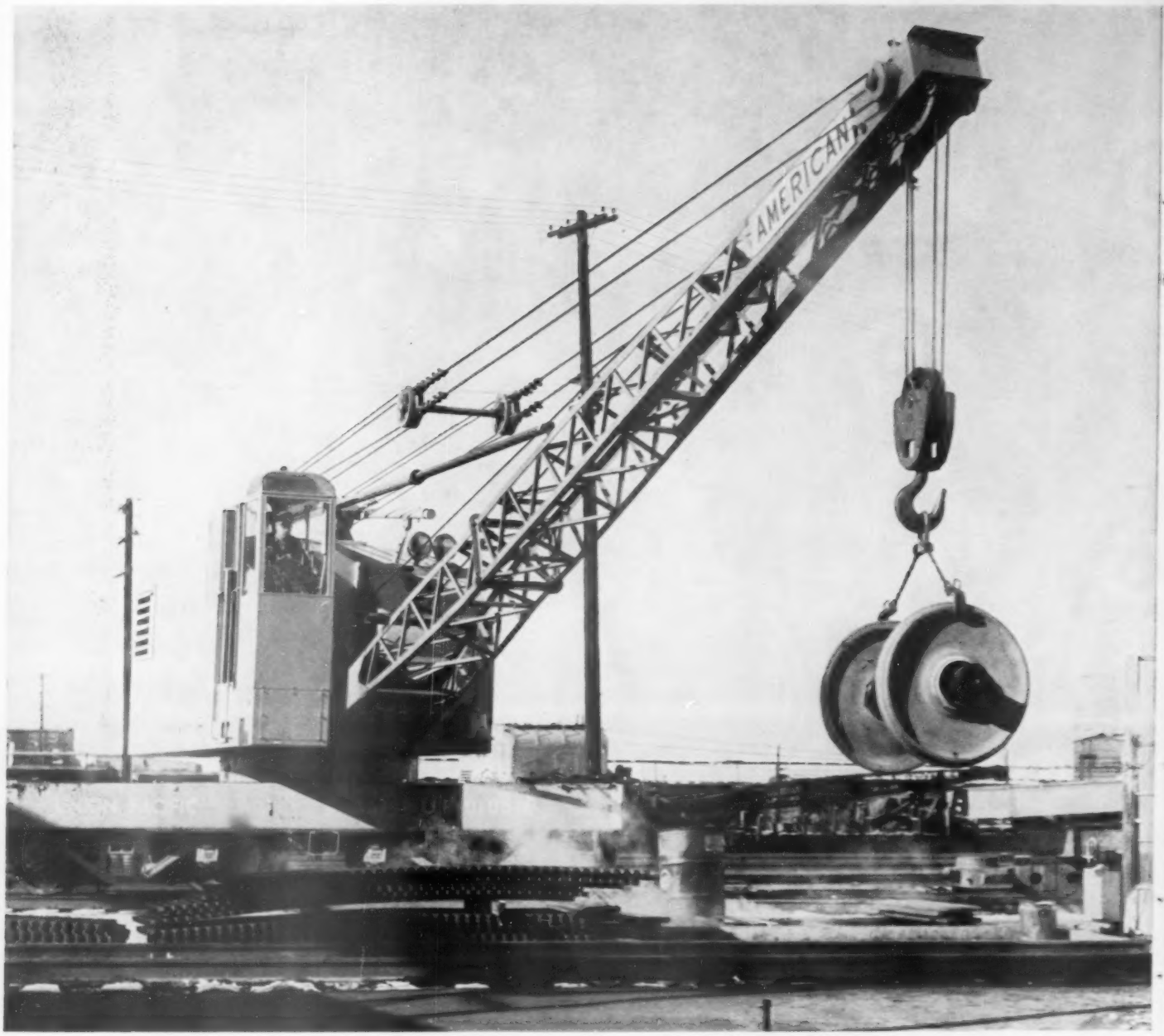
Truck shimmy and side bearing problems are eliminated by *Central Bearings*. Mileage between wheel turnings is greatly increased and cost reduced. Specify them for your new equipment. Apply them now to your existing cars at surprising low costs . . . sell the new comfort . . . and watch passenger volume grow!

* *Central Bearings* occupy the space formerly used by center plates. They eliminate side bearings and require no lubrication. Available in a simple, easy-to-install "package", so they may readily be applied to existing cars.

GENERAL STEEL CASTINGS

GEARED TO PROGRESS — P R I — MEMBER

GRANITE CITY, ILL. EDDYSTONE, PA.



INCREASES ON-TRACK PRODUCTION 20%

Modern as the minute is the diesel-electric system used in American DiesELectric* Locomotive Cranes. Electric trucks provide smooth, trouble-free drive while the diesel engine delivers plenty of economical power to the machinery deck. Air controls make operation of the big American Locomotive Cranes a finger tip job that keeps the operator sharp all day long—increases on-track production as much as 20%.

The Union Pacific Railroad, one of the leading lines in the country, is keeping abreast of the times by modernizing not only their rolling stock, but maintenance of way and materials handling equipment. New in one of Union Pacific's car shops is the American 25-ton DiesELectric shown above.

Out on the mainline American is tops for construction and maintenance—in the shops it'll tackle the toughest lifting jobs with ease. Famous American DiesELectric Locomotive Cranes are available in 25 to 80-ton capacities to fit your job!

AMERICAN HOIST
and Derrick Company

St. Paul 1, Minnesota

*Registered Trademark. Diesel-Electric Locomotive Crane U.S. Patent, No. 2083460, Canadian Patent No. 368226 and touch control U.S. Patent No. 2370859 granted to American Hoist and Derrick Co.

Current Publications

BOOKS

THE METROPOLITAN TRANSPORTATION PROBLEM, by Wilfred Owen. 301 pages. The Brookings Institution, 720 Jackson Place, N.W., Washington 6, D. C. $4.50.

The independent, non-profit Brookings Institution has again come through with one of its definitive and exhaustive analyses of a pressing national problem. In scope and in seriousness of purpose, this study matches the notable "National Transportation Policy" study on which Mr. Owen collaborated with Dr. Charles L. Dearing.

Anybody interested in urban and suburban transportation will find herein practically all the knowable facts about the subject. In this study, the author has attempted to break new ground by looking at the problem of urban mobility as a whole. Its objective is to determine the requirements of public policy.

The author is not optimistic about the role of rail transportation in urban and suburban areas. He does not agree on the whole with the theory that the best and cheapest answer to urban congestion is to put more emphasis on rail transportation in and out of cities. "In general," he writes, "the problem is motor transportation, and increasingly automobile rather than public carrier transportation. Neither economic analysis nor transportation history suggests a return to public transportation on a scale that would be decisive."

The study explores, however, new financial and taxation policies which should benefit public carriers measureably. One of these proposals is the use of highway revenues to help support peak-hour transit service—a device which the study says "might prove acceptable to highway users in the future."

•

WHEN McQUEEN WAS KING, by Harry D. Lyons. Vantage Press, Inc., 120 W. 31st. st., New York 1. $3.50.

A novel of railroading, telling the story of one Jim Ryan from the time when, as a boy, he crosses the Wisconsin prairies in his father's wagon to settle in a new land, through his action-packed years, until he is an old man.

•

THE TRANSPORTATION CORPS: MOVEMENTS, TRAINING, AND SUPPLY, by Chester Wardlow 564 pages, illustrations. Office of the Chief of Military History, Department of the Army. Available from the Government Printing Office, Washington 25, D.C. $4.25.

Purpose of this volume is twofold: to present and evaluate the machinery and procedures employed by the Army Chief of Transportation in moving troops and military materiel within the United States and from the United

APRIL 6, 1872
NEW INVENTION MAKES EVERY MAN A TELEGRAPHER
NEW YORK, April 6—A simple telegraph instrument which automatically prints the dispatch being sent or received has been designed by Messrs. Foote and Randall of New York.
The advantages of a telegraph transmitting apparatus which can be operated by any person of average intelligence, after a few minutes instruction, is sufficiently obvious without further comment. Every man can thus be his own telegraph operator, and railroad conductors, locomotive-runners, clerks or office boys can quickly become expert in the use of the instrument.
In the transmitting apparatus as in the receiving apparatus, a train of wheels is employed

Even back in the days when the printing telegraph was news, Graybar was active in railroad communications. From 1869 to date, Graybar has always kept its stocks and services in tune with the newest developments in railroad communications. Wires and cables... to carrier telephone and telegraph equipment... sound systems of all types, each item in the long list of modern railroad requirements can be supplied through 120 conveniently located Graybar offices and warehouses.

To save paper work, to save time, and to get the experienced assistance of railroad electrical equipment specialists, make your next order read "Via Graybar". Graybar Electric Company, Executive Offices: Graybar Building, 420 Lexington Avenue, New York 17, N.Y.

$41-209

100,000 electrical items are distributed throughout the nation...

via GraybaR

OFFICES AND WAREHOUSES IN OVER 120 PRINCIPAL CITIES

Grading for drainage, electric-control blade gives fast, smooth dozing action. Other quick jobs: repairing washouts, clearing right-of-way, spreading ballast, aligning track, trimming side slopes, switching cars in emergencies.

SPEED YOUR *right-of-way* maintenance with "*work-and-run*" Tournatractor

Driving to job at speeds to 17 mph saves delays, gets more work done. Tournatractor follows the track . . . or travels by highway . . . or alongside on right-of-way . . . takes shortest route. Big tires do not damage tracks, ties, switches.

Coal, cinders, ballast, or stockpile of other materials are specialties of high-speed Tournatractor. Big tires compact coal without grinding it to fines . . . reduce danger of spontaneous combustion.

Tournatractor's 17 mph speed really pays off on towing jobs. It pulls scrapers on ditching, building of sidings, yards, and grade crossings. High-traction tires, 208 hp helps it self-load quickly.

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Tournatractor—Trademark Reg. U.S. Pat. Off. T-789-RR-2

LeTourneau-WESTINGHOUSE Company
Railroad Sales Division
Peoria, Illinois
A Subsidiary of Westinghouse Air Brake Company

States to the oversea theaters of operations, and to outline the methods used and the problems encountered by the Chief of Transportation in training the troops and providing the equipment and supplies needed to maintain effective transportation services in the oversea commands.

This is the second in a group of three Transportation Corps volumes. The first, "Responsibilities, Organization and Operations," was published in 1951.

•

CHESSIE'S ROAD, by Charles W. Turner 286 pages, illustrations, maps. Garrett & Massie, Inc., Richmond, Va. $4.90.

This, the first comprehensive history of the Chesapeake & Ohio Railway Company, describes the pioneer effort of the predecessor roads to lay rails westward through central Virginia and the Blue Ridge, its extension into the old northwest to Chicago, and the rise of a modern coal-passenger line now considered one of the "big four" of the east. The book is well-illustrated and well-documented.

FROM THE MANUFACTURERS

SHARPEN MINING TOOLS WITH EX-CELL-O 49-A GRINDER. 4 pages. Ex-Cell-O Corporation, Dept. RA, 1200 Oakman Blvd., Detroit 32. Free.

A complete description of the Style 49-A grinder as applied to the sharpening of mining machine tool bits and rock drills. Particular reference is made to grinding carbide tipped tools.

•

ILO SINGLE WHEEL R.R. CAR SHUNTER. 4 pages. Railroad Car Shunter Corporation of America, Dept. RA, Woolworth Bldg., New York 7. Free.

The shunter is operated by one man and can move railroad cars with a total weight up to 100 tons. It is capable of climbing over rails and obstructions, and of traversing rough ground under its own power.

•

LINCOLN WELDIREC.ORY FOR STAINLESS STEELS, NON-FERROUS METALS, CAST IRON AND MANUAL HARDSURFACING. 28 pages. The Lincoln Electric Company, Dept. RA, Cleveland 17. Free.

Lists electrodes, properties of weld metal, and specific type of work for which electrodes are suitable.

•

SOUND MOTION PICTURES. Thomas A. Edison, Inc., Dept. RA, West Orange, N.J.

Sound motion pictures on aspects of material handling and battery power are shown frequently by the field force of the Edison Storage Battery division. These films include: "Storage Battery Power," "Modern Material Handling" and "Modern Battery Shop Practice." To arrange for a showing, contact nearest Edison Storage Battery field man or: General Sales Manager, Edison

Storage Battery Division, Dept. RA, West Orange, N. J.

•

ALWAYS ON THE JOB. 20-min., sound slide film. Air Reduction Sales Company, Dept. RA, 150 E. 42nd. st., New York 17. Free-loan, or may be purchased for $15.

Covers the basic principles of safety in electric arc welding. A companion film to Air Reduction's prize winning oxy-acetylene safety slide film, "The Guy Behind Your Back," the new film also features the light, cartoon approach to this serious topic.

•

CASTING KAISER ALUMINUM. 388 pages. Technical Editor, Dept. RA, Kaiser Aluminum & Chemical Sales, Inc., 919 N. Michigan ave., Chicago 11. Free when requested on company letterhead; $5 for personal libraries.

Extensive information on all phases of aluminum casting has been carefully correlated into a single volume. Progressive foundry practices are fully treated with a complete analysis of aluminum alloys and their characteristics. Designed primarily for foundrymen interested in using aluminum, its scope extends to any metal fabricator seeking comparative information about the possible application of aluminum castings to his product.

•

TD-6, TD-9, TD-14, and TD-18 DIESEL CRAWLER TRACTORS. Consumer Relations Department, International Harvester Company, Dept. RA, 180 N. Michigan ave., Chicago 1. Free.

Information on these International diesel crawler tractors is contained in 8-page, 2-color mailing folders as follows: TD-6, booklet CR-491-F; TD-9, Booklet CR-490-F; TD-14, Booklet CR-489-F; TD-18, Booklet CR-488-F.

•

SPLICING KITS. 12-page, four-color booklet. Dept. D6-196, Minnesota Mining & Manufacturing Co., Dept. RA, St. Paul, Minn.

Contains instructions and applications for entire line of Scotchcast brand splicing kits. Describes the Unipak container of Scotchcast electrical insulating resin No. 4 for pouring field-encapsuled splices and the three types of splicing kits with which it is used. Describes also the 82-A series split mold splicing kits for making in-line splices for weather exposed or direct burial locations; and the 90-B kit for making wye or tap splices with a split mold; and the 89 series of kits for communication splices.

PERIODICAL ARTICLES

JENKS OF THE ROCK ISLAND. Fortune. September, 1956, pp. 132-133. Time, Inc., 9 Rockefeller Plaza, New York 20. Single copies $1.25.

Introducing Downing B. Jenks, the new chief of a major U. S. corporation. At 41, he is one of the youngest men ever to become head of a major railroad.

Green light for revenue traffic

--when D Tournapull maintains right-of-way!

When your right-of-way earth-moving for maintenance and construction is handled by 138 hp, 29.5 mph, 7½-yard D Tournapull, you don't have to worry about work trains. You have no slow orders, no reshuffling and delaying of revenue traffic, no sidetracking.

Rubber-tired Tournapull is a fast-moving off-track tool...travels to most jobs via highway...does most of its work off-track. Even when traveling or spreading ballast on main line tracks, this mobile handyman can get out of the way in a hurry if freight or passenger trains approach. Big, low-pressure tires won't damage tracks or switches, won't chamfer ties.

One man — one machine

This one-man operated handyman "D" loads, hauls, and spreads dirt or ballast wherever you want it ...needs no work train, work crew, or auxiliary tools. It travels between assignments by highway or right-of-way. There's no waiting for haul equipment, no wasted work-time while crews move work trains into and out of sidings.

D 'Pull is highly maneuverable. Working in narrow quarters, this mobile maintenance tool turns in a space less than its own length.

Big blade for dozer work

With 8'1" wide dozer blade, this Handyman handles light bulldozing for added utility. For winter clean-up, dozer blade can be replaced with V-snowplow.

On scraper work, "D's" can self-load 5 yards or more of bank material. If desired, 2 or more "D's" can work together, push-loading one another for bigger loads and even better production. Or any tractor or motor grader can be used as a pusher, for heaping loads on heavy-yardage jobs where big production is needed, on a tight schedule.

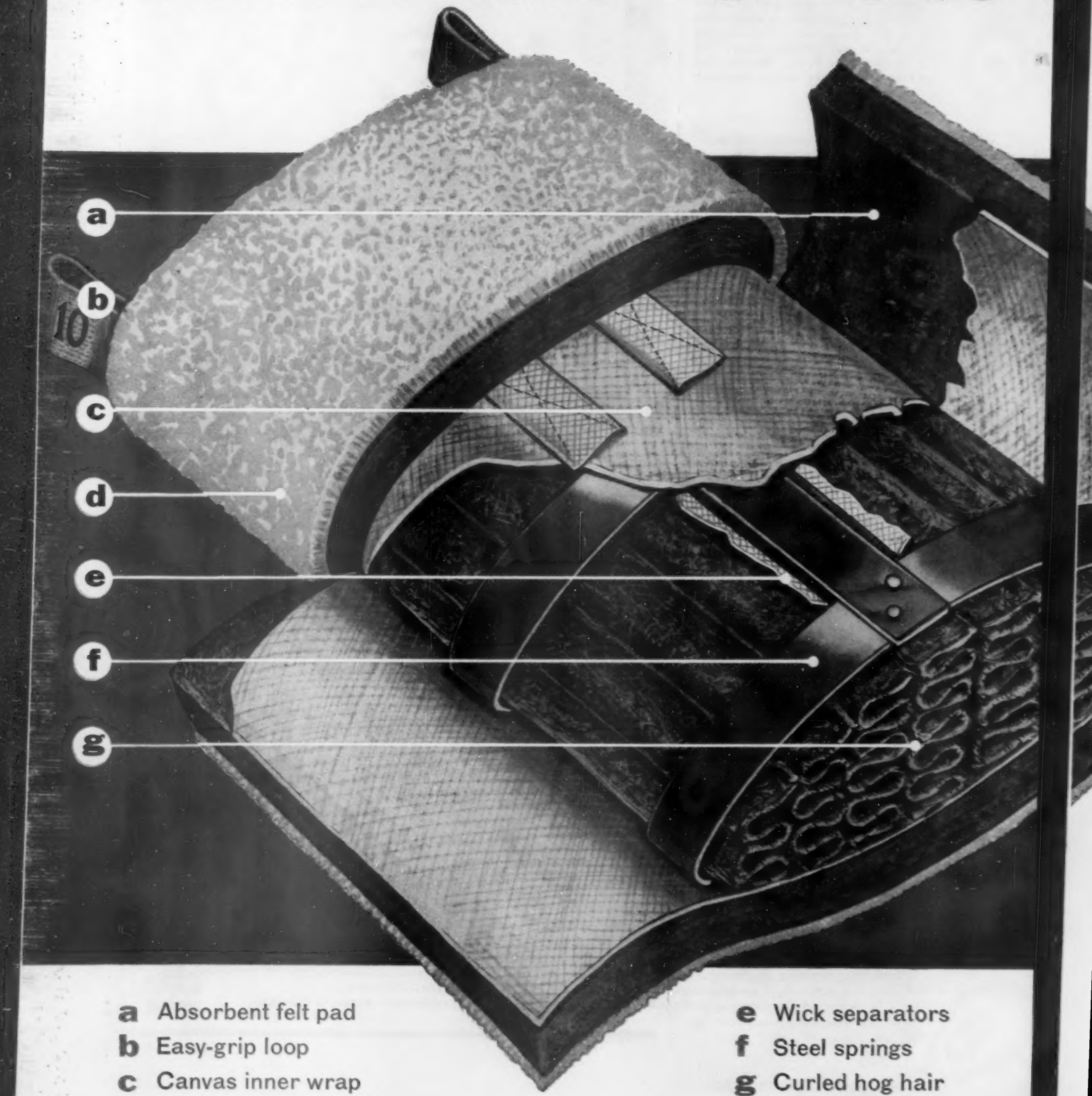
Why not get the complete facts on mobile, versatile D Handyman? Ask us for complete specifications and on-the-job performance reports.

Tournapull—Trademark Reg. U.S. Pat. Off. DP-1150-RR-z

LeTourneau-WESTINGHOUSE Company
Railroad Sales Division
Peoria, Illinois
A Subsidiary of Westinghouse Air Brake Company

See for yourself

EVERYTHING* IN THIS



a Absorbent felt pad
b Easy-grip loop
c Canvas inner wrap
d Wicking-action cover
e Wick separators
f Steel springs
g Curled hog hair

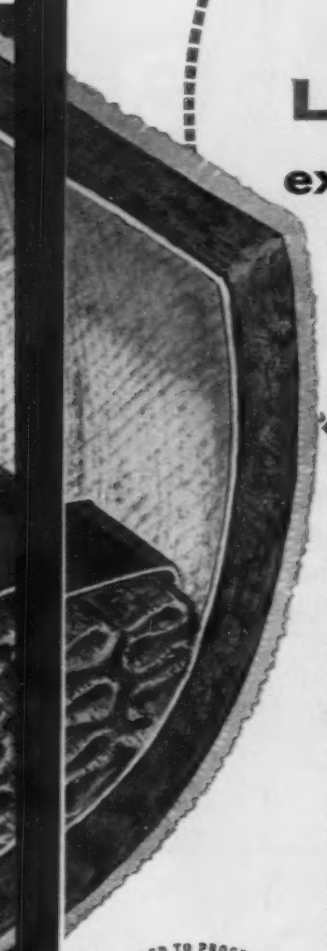
PAD FEEDS OIL...

new spring-action

SPRING-PAK LUBRICATION PAD

PATENTS PENDING

exerts constant pressure on the journal



**Everything except the spring steel, and even that helps!*

Yes . . . in this new Spring-Pak Lubrication Pad, the resilient, curled hog hair acts as a reservoir. . . . The long-lasting cotton pad—the high-quality felt—the wick separators *. . . all have remarkable capillary action . . . all feed oil continuously!*

The tough, cotton outer jacket has been especially selected for its high wicking action—will not glaze—is lint-free.

Flexible, loop handles make application or removal fast and easy. No special skill is required—there's *never* a need to "jack" the box.

Note the inner steel construction in the cut-away illustration. Regardless of temperature, these bands prohibit any possibility of the core collapsing. Made of highly resilient, spring steel, they assure constant pressure on the journal at all times.

Use it . . . re-use it. The new Spring-Pak Lubrication Pad can be easily cleaned in hot oil—has exceptional reclamation value.

SPRING PACKING CORPORATION has been in the journal box lubrication field since 1920. Our trained personnel are thoroughly experienced, always ready to be of service.

GEARED TO PROGRESS

RPI MEMBER

Write today for complete information.

Serving the Railroads *for over 36 years*

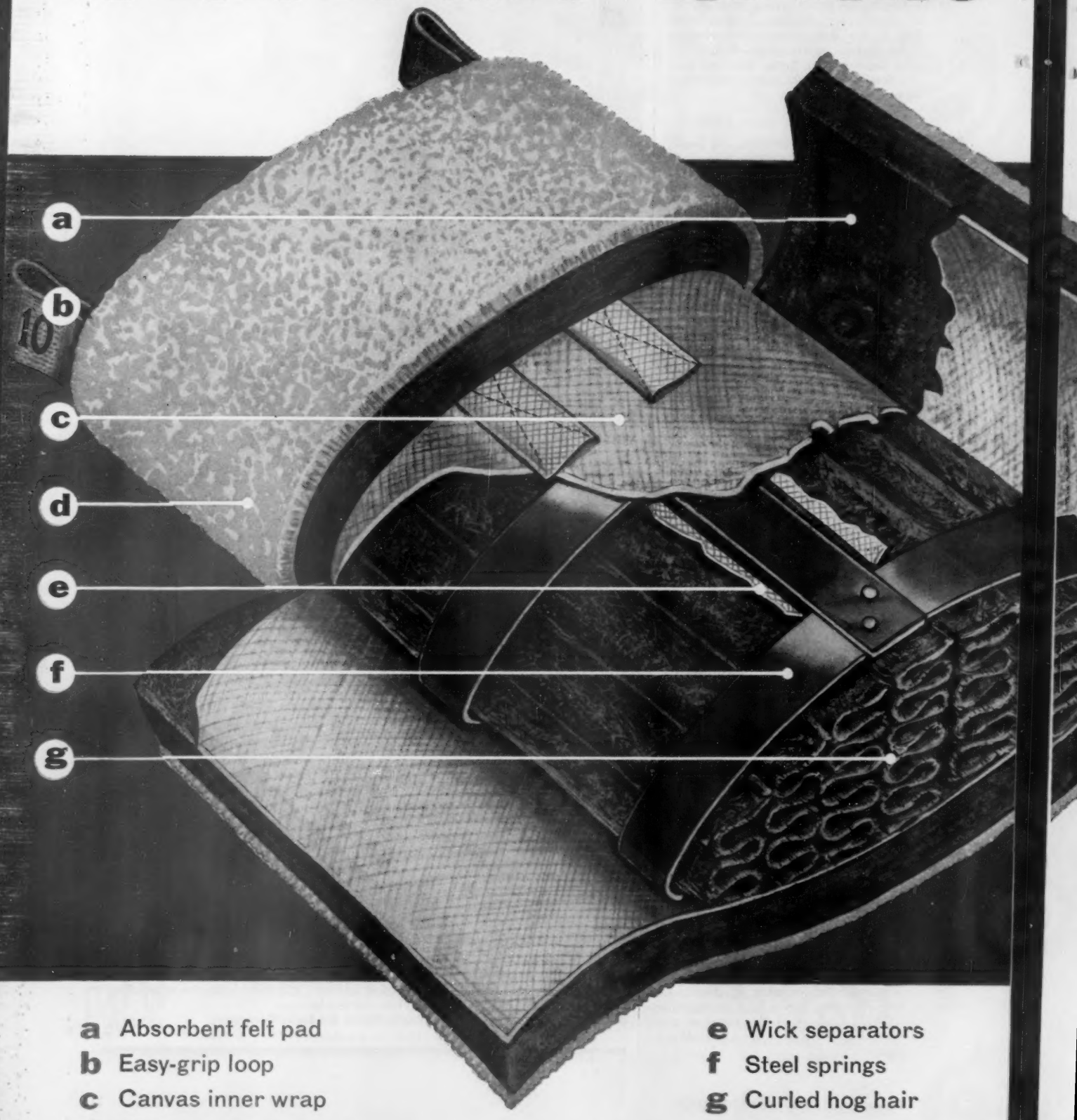
SPRING PACKING CORPORATION

332 South Michigan Avenue Chicago 4, Illinois

SEALANTS • CARLINER • DEDNOX COATINGS • JOURNAL BOX PACKING • PACKING RETAINERS

See for yourself

EVERYTHING* IN THIS



a Absorbent felt pad
b Easy-grip loop
c Canvas inner wrap
d Wicking-action cover
e Wick separators
f Steel springs
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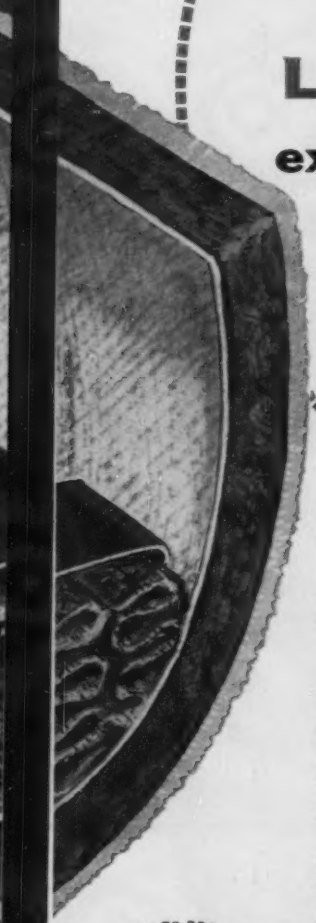

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GEARED TO PROGRESS

P R I

MEMBER

Write today for complete information.

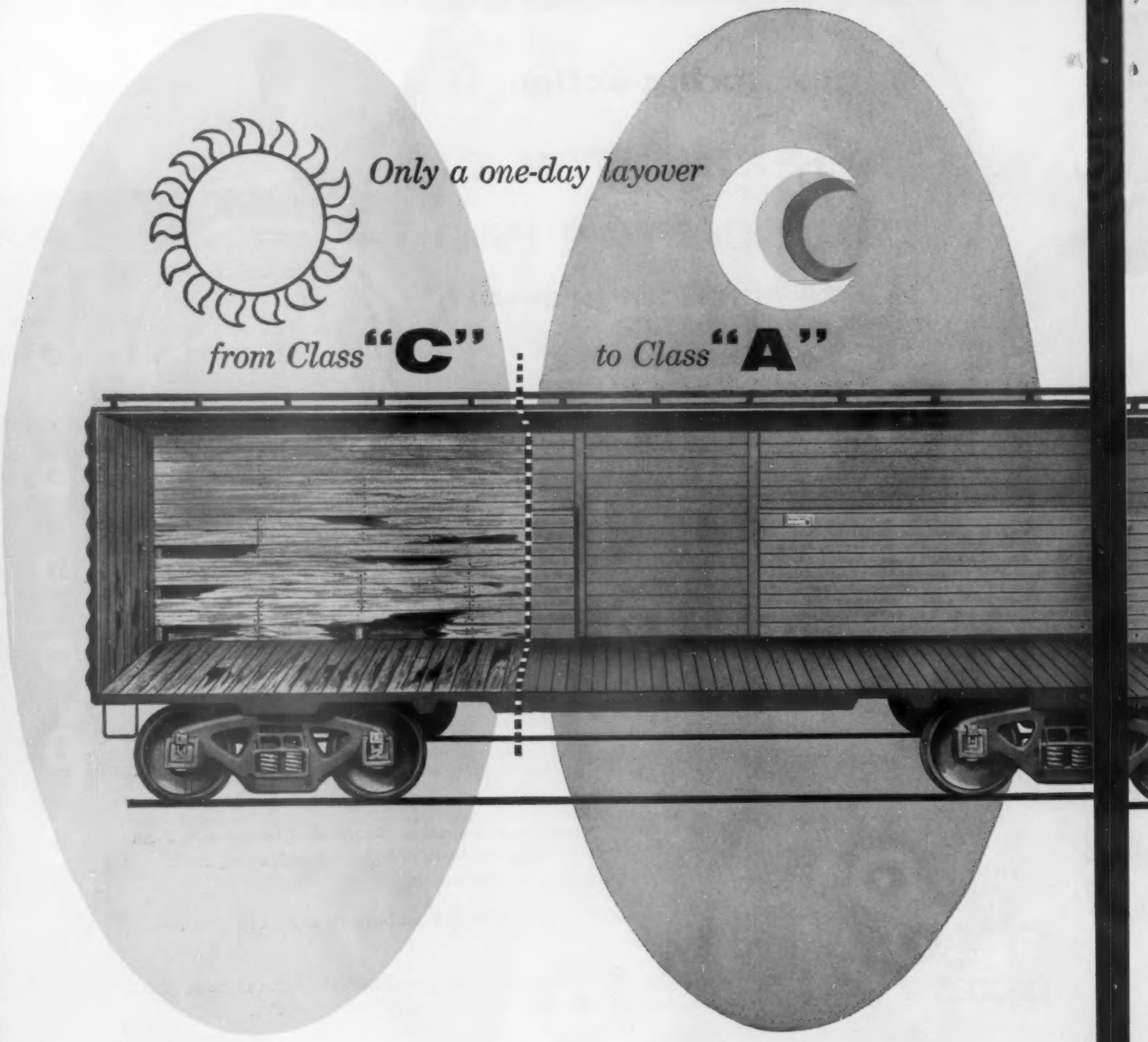
Serving the Railroads MR. ESPEY SPRING PACKING CORPORATION *for over 36 years*

SPRING PACKING CORPORATION

332 South Michigan Avenue Chicago 4, Illinois

SEALANTS • CARLINER • DEDNOX COATINGS • JOURNAL BOX PACKING • PACKING RETAINERS

Fast, inexpensive relief



GEARED TO PROGRESS
P R I
MEMBER

from the Car Shortage

low-cost

Espey

Carliner

makes old cars ***better*** *than new*

At a cost so low it should easily come within present operating budgets, you can transform old cars into top-revenue carriers with *permanent* new Espey Carliner.

It goes on over splintered, but sound wood floors and lining—over cracks, gouges, oil spots—forms an *inseparable* lamination much stronger than wood. Seams, joints, and corners are sealed . . . warping and separation prevented.

Your shippers get what they want and need—good-looking, moisture-free, vermin-proof cars, completely safe for edible lading.

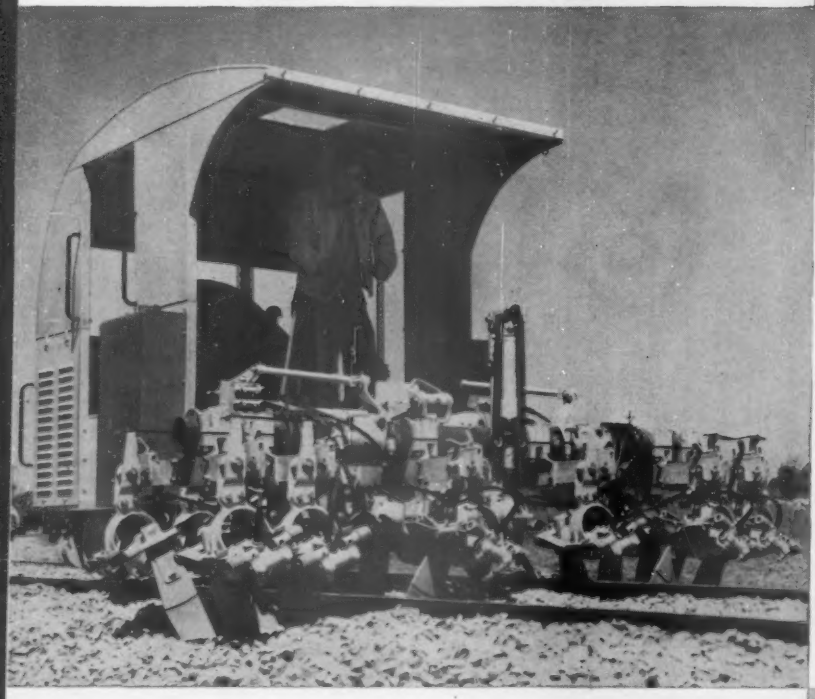
Ease of application, effectiveness in use, and increased car-earnings have all been demonstrated on *many* major roads. Espey Carliner surface-armor will serve you as nothing else can. Write for facts, today.

SPRING PACKING CORPORATION

For over 36 years

332 S. Michigan Avenue, Chicago 4, Illinois

from GANDY-DANCER to . . .



JACKSON MANUALLY GUIDED TIE TAMPERS & POWER PLANTS

Exceedingly efficient and widely used by small gangs in low lifts and smoothing work, cross-overs and spots the on-track machines can not reach.

JACKSON MULTIPLE TIE TAMPER

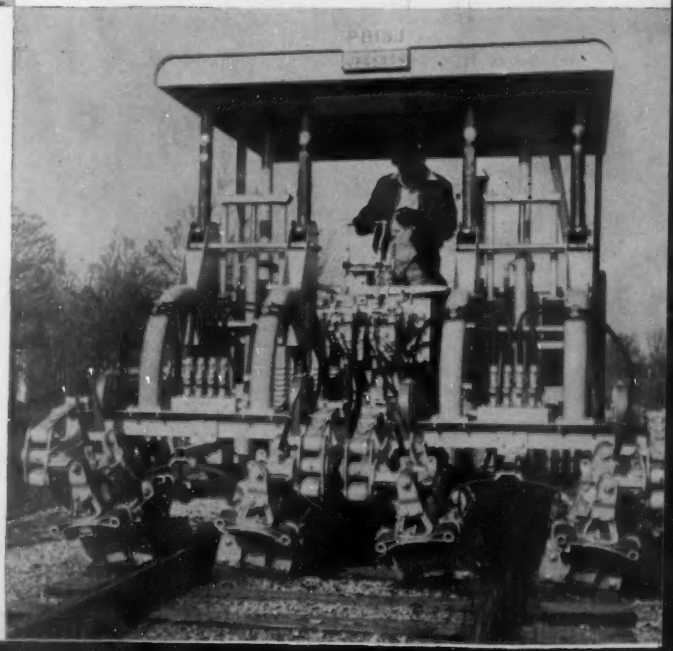
Unsurpassed for putting up track of finest uniform quality in all lifts from the highest to those no lower than average size of ballast used.

JACKSON TRACK MAINTAINER

For both putting up and maintaining track of finest quality under the widest range of track lift and ballast conditions this machine has no equal. Invariably the choice of those who investigate thoroughly.

During our more than 35 years of specialization in the manufacture of tie tamping equipment, the name JACKSON has consistently been synonymous with the best, most economical means of achieving and maintaining track of finest uniform quality under ALL conditions.

Let us help you to the best possible solution to your track tamping problems.



JACKSON VIBRATORS, INC.

LUDINGTON, MICHIGAN, U.S.A.

Would Increased "PR" Advertising Be Profitable?

President W. G. Vollmer of the Texas & Pacific asked our good friend J. B. Shores, T&P's director of public relations, what he thought of a piece which appeared in this space in our July 23 issue. JBS didn't think much of, at least, a part of it. Specifically, he didn't agree with our assertion that *"transportation is much further down the road toward socialization than the electric power business is"*; and that the average informed citizen is much more aware of the socialistic inroads into electric power than he is of the much deeper socialistic invasion of transportation.

Mr. Vollmer sent us Mr. Shores' pointed comment, with the thought that it would interest our readers. Here's what JBS wrote (slightly abridged, for reasons of space limitations):

Where Mr. Shores Disagrees

"While there is a parallel between the socialistic encroachment upon electric power utilities and the railroads, it is not so pronounced as the editorial might lead one to believe. Today, the government produces about 20 per cent of the nation's electric power.* It has such great projects as the TVA, which is constantly in the public eye, various REA projects, as well as many hydroelectric projects in the Far West. The public is conscious of this activity of the federal government and the privately owned utilities thus have an opportunity to point to it in an effective way. On the other hand, the federal government does not own any railroads in the continental United States. There is every reason why the public should be more conscious of the socialitic trend in the public utility industry than in the railroad industry.

"I agree fully with Railway Age's proposal that the railroad industry needs a long range advertising and public relations program designed to create a fuller and more sympathetic understanding of the situation confronting the railroad industry, a situation which stems from the inadequate assessment of user charges for public-provided facilities and from inadequate freedom in rate-making for railroads.

"Evidence of the power of advertising is a matter of common knowledge. It is the force which stimulates the demand for the great outpouring of our nation's goods and services. It can be a force for winning public support of those measures essential to the well-being of the railroad industry. But to achieve that goal calls for a lot of advertising dollars upon the part of the industry —much more than has been spent in recent years.

"A great electric manufacturer suffered a heavy loss of business as a result of a prolonged strike. Once the strike was settled, the company earmarked 32 million dollars to be devoted to advertising in 1956 in an effort to regain its competitive position in the electric equipment industry. This was an increase of $22 million over 1955.

"A leading automobile manufacturer experienced a sharp decline in its motor vehicle business in 1953. Its proportion of the nation's automotive sales dropped from 20 per cent to 11 per cent. Its competitive position was seriously impaired. To regain its former position this manufacturer improved the appearance and efficiency of its automobiles and then upped its advertising expenditures from $29 million in 1953 to $54 million in 1955. While it did not fully recover in 1955 its former competitive position, its sales rose from 11 per cent of the market to approximately 19 per cent.

"As the result of public policy, both nationally and locally, with respect to the assessment of user charges for tax-provided facilities for motor carriers, commercial air lines and inland water carriers, the railroads have been placed at a competitive disadvantage. As a consequence, substantial inroads have been made into their freight and passenger traffic.

Profits from Added Advertising

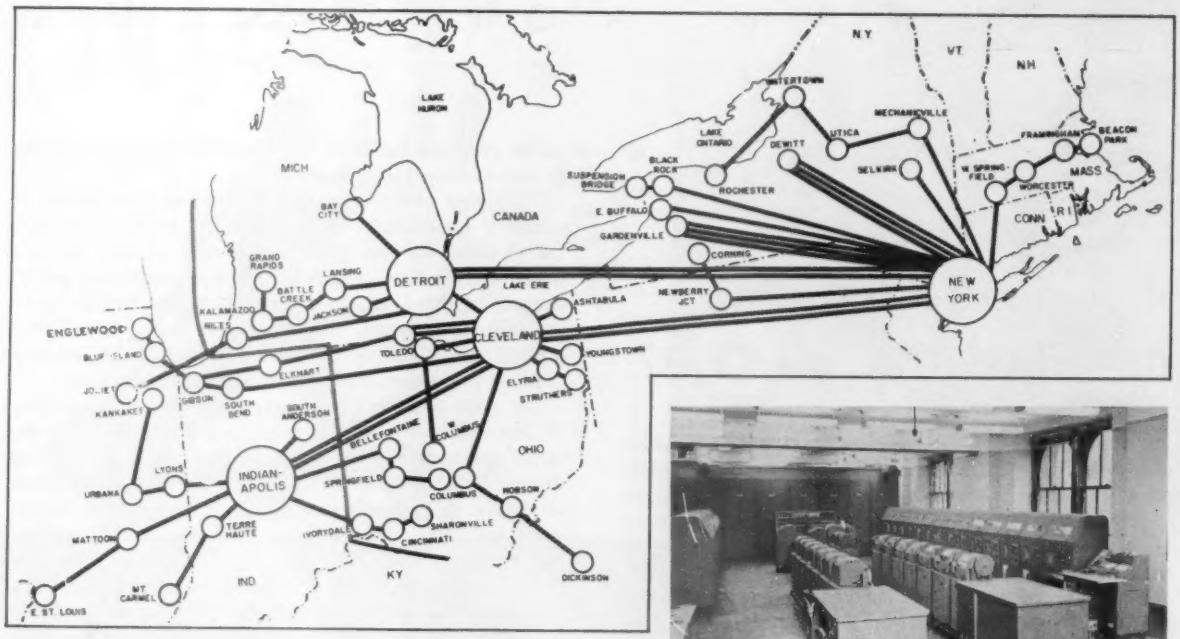
"To achieve the position of competitive equality, it is my conviction that the railroads will have to replace their present modest advertising program with a bold, courageous and expanded one. Instead of spending less than a million dollars annually, the AAR's expenditure should be not less than $5 million.

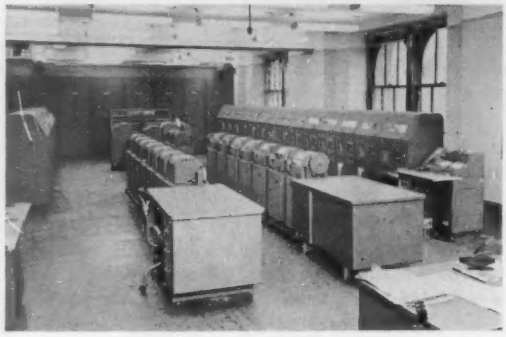
"In the long run, would it not be more profitable for the railroads to spend, let us say, $25 million over the next five years, and thereby regain a greater measure of competitive equality, than it is to spend inadequate sums annually and continue to lose ground to their competitors?

"It is my conviction that the public can be sold on competitive equality for the railroads. The history of advertising tends to support that conviction."

It isn't where you start from, but where you get, that really counts. Mr. Shores started with a somewhat different premise from ours, but he reached substantially the same conclusion—that there needs to be a great expansion in the railroads' continuing efforts to educate the public on the inequities in transportation.

*The divergence between Mr. Shores' view and ours, as to the relative degree of socialization in electric power and transportation, is easily resolved. As Mr. Shores correctly points out, socialized power is about 20 per cent of the total and this is clear to see. But, in the case of transportation, except railroads, practically all of the fixed plant (highways, waterways, airports) is in public ownership, i.e., socialized. Only the vehicles (trucks, buses, barges, planes—and repair facilities) are privately owned. Thus the ratio of socialized investment to private ownership is certainly far higher in transportation as a whole (fixed and mobile plant combined) than the 20 per cent which Mr. Shores points out in electric power. Furthermore, practically all of the enormous expansion in fixed plant which is occurring in transportation (highways, airports, inland waterways, including the St. Lawrence) is being done under socialism and not by private investment.—EDITOR.





HEART OF SYSTEM in each of Central's four districts is Teletype room like that in New York bureau (right) permitting almost instant relay of train data via circuits mapped above. New York, Cleveland, Detroit and Indianapolis are the hubs.

Car Reports in a Flash

New York Central's new network permits relay of data between yards in an instant—Distribution of daily "passing book" seen as big help in car tracing

The planned opening on October 1 of its Detroit Service Bureau will give the New York Central a system-wide electronic car reporting network. Activation of this link in a four-bureau operation will permit almost instantaneous transmission of train information between all yards in the Central's four districts.

The first bureau to be set up was at New York (on April 2), where responsibility for controlling and reporting train and car movement among 21 mechanized yards, involving about 35% of the road's total car movements, is seated. The Cleveland bureau, hub for 18 yards in that area, which accounts for roughly 28% of the road's car movements, was established June 4.

Inclusion on August 6 of the Indianapolis bureau—headquarters for the Southern district's 19 yards with about 23% of the total car movements—left only a small percentage of total freight car movements outside the scope of the reporting network.

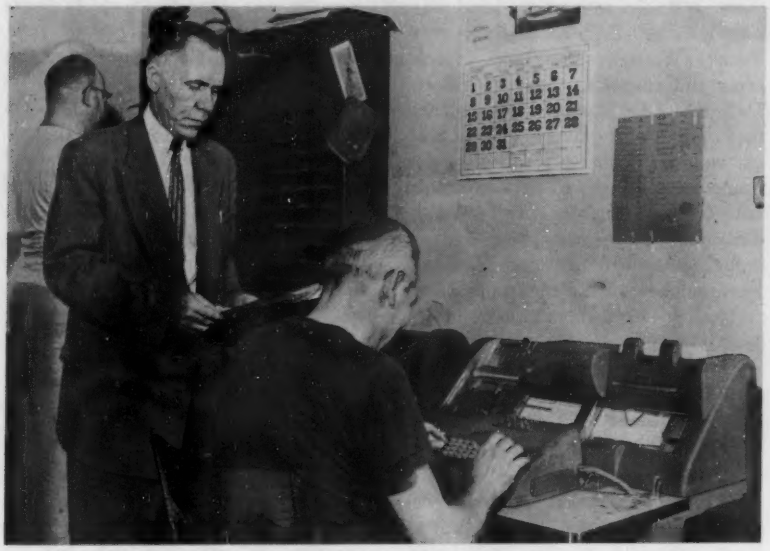
These now become the responsibility of the Detroit bureau.

A single, centralized service bureau for the road's four districts was ruled out by the Central in setting up its reporting organization because it was felt that the four individual bureaus would be more useful from a traffic and sales point of view.

Proximity, and, hence, accessibility to shippers was the predominant factor in this decision although it was also established that it would be more economical to establish separate bureaus for each district

COLLATERAL BENEFITS

In addition to the immediate benefits of the Central's car reporting system—expedited car movements and the ability to provide patrons promptly with information about their shipments — additional advantages are anticipated as use of the network continues. Improved car distribution; more efficient use of freight train equipment; compilation of comprehensive and current data for traffic flow analysis; and, later, development of accounting and personnel uses are likely.



FIRST STEP in NYC's procedure is punching out card for each car at reporting yard. Cards are collated in order of cars in consist and are then used to transmit train information to district bureau.

AS SOON AS it reaches bureau, data is relayed to next yard ahead.

INCOMING TAPES punch cards for district record of car movements.

THOUSANDS of cards are progressively sorted for current reports.

DATA for passing reports is printed after final sorting of cards.

rather than tie all districts into one headquarters.

However, the four district bureaus, while operating separately, will be coordinated with each other and will relay information on trains passing between districts. In all, the whole nework will take in 67 freight yards.

Developed by the Central's Transportation Research Group under the guidance of F. N. Nye, director of transportation and economic research, the entire project is now supervised by W. H. Leahy, newly appointed director of car reporting. Initiative to set up the network came in October 1954 from NYC President A. E. Perlman, who, Mr. Nye said, "recognized the need for a mechanized car reporting and accounting system."

AT&T and IBM Equipment

The system is built around Teletype equipment, leased from American Telephone & Telegraph Co. and associated companies, integrated with punch card and other equipment leased from International Business Machines Corporation.

Operation of the system begins with punching an IBM card for each car entering a Central yard, using the waybill as source data. The cards then are compiled in the order in which corresponding cars stand in a train as it is made up.

Before train departure, a perforated tape, cut by machine from the "deck" of cards, is fed into Teletype equipment for transmission of the data to the district's central service bureau. There it is automatically and almost instantaneously retransmitted to the next yard or yards on the route of the train.

At the next yard, a new set of cards on the incoming train is automatically produced from the tape generated by the retransmission from the district bureau. If the train is to continue intact through this yard, this deck of cards is used to cut a new tape and the data is again relayed through the district bureau to the next yard ahead. Only in the first instance are the cards punched manually; therefore, as Mr. Nye explains it, "they are self-regenerating; cards make tapes and tapes make cards automatically."

If a car is to be cut from its original train and placed in another, its IBM card is removed from the deck of cards corresponding to the first train and is inserted in proper order with IBM cards recording data for cars in the new train. This requires, however, manual revision of the summarized consist information

HOW THE SYSTEM WORKS (See Next Page)

on the final or caboose card containing the total number of cars in the train—divided loads and empties—and the train tonnage.

Receiving advance information on trains, a receiving yard is enabled to program power and crews in advance for the speediest and most efficient movement of the train through the yard.

Reports of all symbol trains moving from yard to yard funnel through their respective headquarters bureau (Eastern district, New York; Western, Cleveland, Southern, Indianapolis; and Northern, Detroit). As cards are punched they are progressively sorted into car number sequences and filed for immediate reference in connection with tracing inquiries. At 1:30 p.m. daily, the cards are given a final collating, merged in numerical sequence, and run through an accounting ("show") machine which prints the latest record for each car.

Using a high speed multilith machine, a "passing book" is speedily printed and dispatched via train or air mail to each of the approximately 100 NYC traffic and transportation offices in the United States and Canada, thus giving sales representatives finger-tip knowledge of the latest location of each customer's shipment.

Here's How the Central's Reporting System Works

A total of 67 yards and four service bureaus comprise the car reporting system, and any one of the 67 mechanized yards can readily communicate with any other mechanized yard or any service bureau. Each service bureau acts as a switching center for the Teletype circuits from the yards in its district.

Duplex circuits (i.e. simultaneous sending and receiving) connect yards to their respective service bureau, and the service bureaus to each other. Seven major classification yards on the railroad have direct circuits to their service bureaus: Selkirk, DeWitt, Gardenville, Collinwood, Ashtabula, Youngstown and Toledo Air Line Jct. The remaining 60 yards share circuits: for example, Rochester, Watertown, Utica and Mechanicville are on the same circuit to the New York service bureau.

Any yard can send train consists to any other yard or combinations of yards, and the consists are relayed automatically at the service bureaus.

Yards equipped with IBM equipment prepare their tapes for transmission on a card-to-tape machine, whereas yards having only Teletype equipment manually perforate tape according to format.

Preparing Consists

Although the consists as transmitted are the same general type, they are prepared by two different methods depending upon whether a yard office has IBM and Teletype equipment or Teletype equipment only. The larger yards all have IBM equipment.

In an IBM-equipped yard office, for example Rochester N. Y., the first step is to punch a No. 1 card or *movement data card* from the waybills for each car in an outgoing train. This card has the usual car information such as number, initial, load or empty, routing, consignee, etc.

Any special routing instructions are manually punched on No. 3 or *follower cards*. The cards are then assembled in train order from engine to caboose. Other cards, identified as *header cards*, are punched with information as to train symbol, engine numbers, conductor, departure time, etc., as well as the proper Teletype character directing code to route the consist to the service bureau and the intended receiving yards. This deck of cards is placed in a card-to-tape machine which automatically produces a perforated tape. The tape is placed in the transmitter of a No. 19 ASR machine (automatic sending-receiving Teletype), which is on the sending channel of the duplex circuit to the switching center (service bureau).

Because Rochester is a multi-station, that is, it is sharing a circuit with three other yards, the 19 ASR will not begin transmission until called by the service bureau. The service bureau sends out start patterns to all multi-stations on a circuit in a roll-call manner. When Rochester receives its start pattern and a tape is in the transmitter, the 19 ASR begins transmission of the train consist. Incoming consists are received at the yard office as both page copies and as perforated tapes.

Consists are received at the service bureau as a tape on typing reperforator-transmitters. Consists have at least two addresses: the service bureau local outlet (passing report) and the next major yard where the train is to be switched. Coding perforations for routing (addresses) at the beginning of the tape are read by the switching equipment, which sets up the cross-office circuits and connections to outgoing lines and the service bureau local outlet. Consists are routed over the cross-office circuits to typing reperforator-transmitters on the outgoing lines and to receiving-only typing reperforators on the local outlet. The switching equipment is designed so that consists are retransmitted simultaneously to the service bureau local outlet and to the next yard.

The originating yard completely codes each consist tape for all destinations. Thus consist tapes are coded only once and all switching is performed automatically by the switching center equipment, even though the consist may be routed to yards served by different switching centers.

For example, let's follow the consist of a westbound freight train that leaves Gardenville, N.Y., for Collinwood, Ohio. At Gardenville yard office the tape is coded for the New York and Cleveland service bureaus and for destination at Collinwood yard office. This consist will be received in New York on a typing reperforator-transmitter, and will be sent via cross-office circuits to a receiving-only typing reperforator on the New York local outlet, and a typing reperforator-transmitter connected to the sending channel of the duplex circuit to the Cleveland switching center. At Cleveland, the consist is received as a typed perforated tape on a reperforator-transmitter, as at New York. A tape is also made at the local outlet, and simultaneously the consist is retransmitted to the Collinwood yard office.

B&O Searches for Uranium

... A POTENTIAL INDUSTRY DEVELOPMENT USE

An exhaustive survey to locate possible radioactive mineral deposits along the Baltimore & Ohio right-of-way has opened the way to a new line of potential industrial development research.

The survey was conducted with the realization that there was little chance of commercial quantities of radioactive ores being found, although it was thought some might have escaped prior detection. However, it was felt the experience of conducting the investigation itself and establishing a permanent record could be valuable to both the B&O and other railroads.

Among the avenues opened by the survey, in addition to the obvious one of detecting such radioactive substances as uranium ore, are these:

- It was found that "readings" for various rock types differ appreciably, making it possible to pinpoint changes by examination of a graph-type record made of the entire survey;
- Oil pools, thought to absorb radiation, might be located when the record is checked against known geologic structures for the given area;
- Sources of commercially valuable germanium might be turned up since this substance is sometimes found in large amounts in carbonized wood which frequently absorbs radioactive minerals from ground water, possibly to a large enough extent that sizable deposits —sufficient for use as a commercial source of germanium—might be detected by such equipment as was used in the B&O survey.

Elevated "Probe" Used

These findings are included in a paper evaluating and describing the B&O survey prepared by John A. Ames, industrial geologist; Frank Sutton, metallurgist; and Marshall B. Streett, Jr., technical trainee.

The B&O investigation covered about 6,200 miles of road. A three-man crew was needed to operate the detection and recording instruments and to drive the rail-highway jeep in which the equipment was mounted.

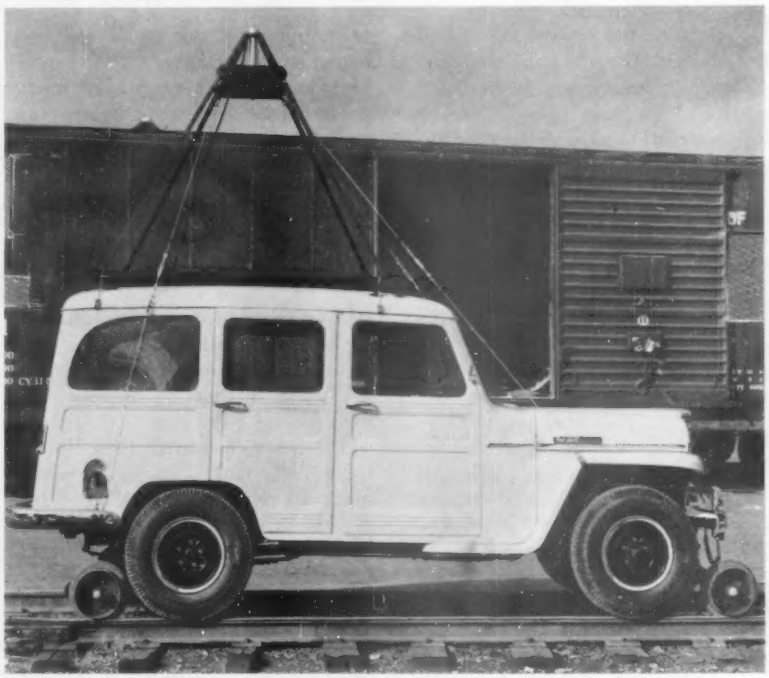
The equipment consisted of a scintillation counter using a "rugged counter circuit" and a 2 by 2 in. sodium iodide crystal (thallium activated) which was positioned in a unit known as a "probe" and elevated 12 ft above the rails on braces fixed to the jeep rooftop.

Behind the driver's seat of the jeep the counter unit and a graph-type recorder were bolted to a table placed on shock absorbing mounts. A rotary converter needed to provide proper voltage and current to the system was fastened to the floor.

The permanent chart record of areas where more than normal radiation was detected is available for further study at any time. Such variations are considered significant when a given chart reading exceeds three times the average or "background" reading for the locality.

As to this background, it was noted that readings for bedrock rail cuts nearly always were from ¼ to ½ above those for adjacent level ground while tunnel radiation usually was recorded as two or three times above background level although inexplicable exceptions were found.

Of possible use to other railroads that might make such a survey, the B&O suggests, was this indication of the dependability of the equipment used: the survey took 57 operating days to complete, working seven days a week, and five days were lost for repairs—three for the jeep and two for the converter. The equipment was selected and the entire survey conducted with the counsel of the Atomic Energy Commission and the United States Geologic Survey.



ELEVATED 12 ft above rails, "probe" for detection of radiation on B&O was transported 6,200 miles on this jeep with recording device inside.

OIL DELIVERY . . . **S.S. GULFLAND, a T-3 type tanker, delivers 60,000 bbl of oil to ACL at its new diesel-fuel terminal at Wil-**

Fuel Oil from Tanker to Tank

New handling facilities at Wilmington, N. C., permit the ACL to buy oil in half-tanker lots and to distribute it as needed to various fueling points

To minimize the cost of diesel fuel the Atlantic Coast Line buys this product in half-tanker lots. Plans begun in 1954 make this possible by the construction of a diesel-fuel terminal at Wilmington, N.C.

Since 1951 the road has been using a large quantity of diesel fuel oil—60,000 bbl (2.5 million gallons) monthly—on its Northern division only. This oil was being obtained commercially at Wilmington, and was shipped in tank cars to 14 fueling stations on this division where it was pumped into storage tanks.

In the planning stage, the road's designers in the mechanical and engineering departments received valuable advice from oil company representatives. These representatives now state that the completed facility is the most modern loading terminal they have seen anywhere on the Atlantic or Gulf coasts. The terminal on the east bank of the Cape Fear river was placed in service this summer. It consists of an unloading dock, one small and two large storage tanks, a fireproof pumphouse, and a car-loading rack.

The dock for the ocean-going tankers has a huge hinged frame which can be lowered to lean over the sides of the vessels. It carries an air-operated hoist which supports three specially reinforced rubber hose lines and positions them to the right or left of center to facilitate making connections to the valves of the tankers' manifolds. The hoist also raises the hose lines to conform with the rising vessels on depletion of their loads.

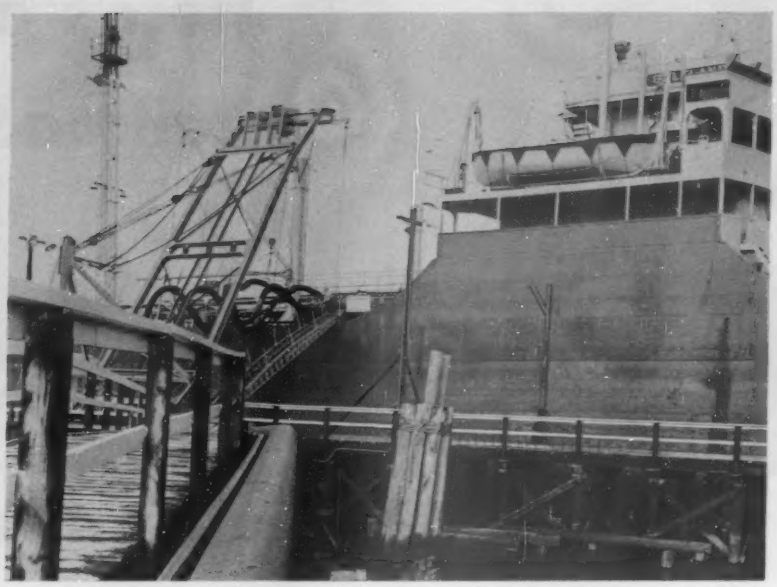
The road acquired two Horton spheroidal tanks from the Esso Standard Oil Company of New Jersey on property located about one-half mile from the dock. Each tank has a storage capacity of about 60,000 bbl, the combined actual capacity of these two tanks being 5,140,938 gal. A third somewhat smaller tank is also available, if needed. The tanks are connected to the dock by a 12-in. steel pipeline, and the three hose lines converge into it.

The car-loading facilities are adjacent to the dock and are enclosed by a heavy wire and steel fence. The concrete pumphouse contains an office for the fuel storekeeper, the pumps and a large air compressor for powering the air motors.

The loading rack has an elevated platform at car-top height, from which counterbalanced retractable gangways extend to each car spot. The rack is flanked by tracks accommodating 10 cars each. The 10 filling cranes are of aluminum and may be swung from one loading track to the other for filling 20 cars at one switching. To prevent spillage and overflow, each loading crane has set-stop meters which control the amount wanted in each car. As soon as the desired gallonage has been delivered, the supply shuts off.

The entire enclosed area is illuminated at night by mercury-vapor lights. These are operated by pho-

mington, N.C. The railroad's car-loading facility is in fence-enclosed area at right.



OIL IS PUMPED by tanker into three receiving hose lines which are supported by a traveling hoist on a leaning frame. The hoist raises the hose lines to conform with the rising vessel under lightened load.

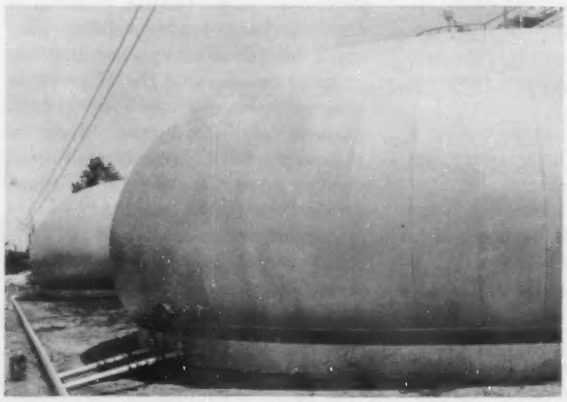
toelectric cells which automatically turn them on when darkness sets in and shut them off at daybreak.

The new fuel terminal is operated on a five-day-week basis by the fuel storekeeper and three helpers, but this force accommodates itself to tanker schedules for receiving and storing the oil. Tanker cargoes are received about every four weeks.

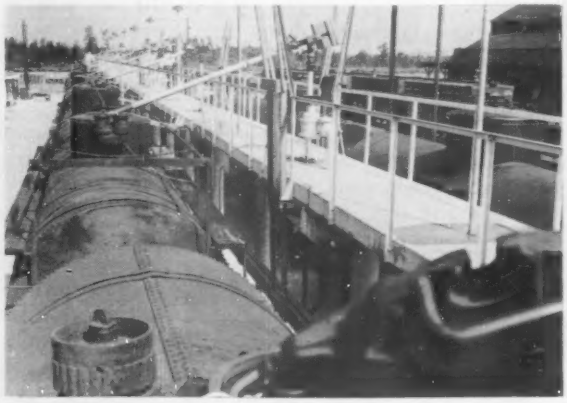
After a tanker ties up to the dock, it requires about 16 min to connect the shore receiving hose lines to the tanker's manifold. From seven to eight hours are then required for the tanker to pump 60,000 bbl of oil into one of the larger storage tanks. The oil enters the tank above a settlement area, where water and sediment collect, so that the fuel taken from the tank will not be contaminated. The newly filled tank is allowed to settle for about 48 hr before drawing fuel and the settlings are drawn off periodically.

The ACL has assigned 165 tank cars to carry the oil from the terminal to the fueling stations at other points. An average of 16 cars are loaded daily, except on Mondays when the week-end demands normally require 20 or more tank carloads. The cars are filled at the loading rack by gravity from the two larger tanks, which are each 42 ft high and 100 ft in diameter. When the storage tanks are half empty, the pumps are then employed to continue the flow at the rate of 300 gpm.

The road reports that the new diesel-fuel terminal has not only resulted in economy in fuel purchases but has also speeded up distribution and has provided a greater reserve storage capacity. Under previous arrangements, loaded cars were sent out, unloaded, returned and refilled in a four-day cycle. With the new facilities, the round trip has been cut to two days.



SPHEROIDAL STORAGE TANKS receive the fuel from the tankers. Each will hold more than 60,000 bbl. Oil flows by gravity to car-loading racks until tanks are half empty, then pumps take over.



CAR-LOADING RACK loads 10 cars at a time through adjustable aluminum filler arms which can be swung from one side to the other to accommodate loading 20 cars at one switching.

Here's a New Railroad Position

Some supervisors on some roads are called Road Foreman-Trainmaster

Within the past three or four years a new title given to supervisors has come into use on several railroads. These supervisors handle the work of both the road foreman and the trainmaster. The title is usually road foreman-trainmaster but in some cases, trainmaster-road foreman.

Changes in operating conditions, advancements in motive power, and new labor conditions brought about this new title. What education is required to fill such a position and what duties are to be performed by the man who has it?

The man must first be a road foreman of engines, or an assistant road foreman. Frequently a road foreman can qualify as a trainmaster, but the trainmaster does not readily qualify as a road foreman unless he had been an engineman before being promoted.

The road foreman's duties are numerous and exacting. He must have a good knowledge of air brakes and air systems, steam generators, and the electrical equipment and diesel engine on the locomotive. He must also understand locomotive operation and train handling.

A man cannot be an expert in each of these categories. He must have as much knowledge of each field as is possible, so he can instruct crews in the correct methods of doing their work and facilitate locomotive maintenance by reporting defects intelligently so they can be found and repaired. His value to the company as a supervisor is enhanced if he is able to perform more duties than just the minimum assigned to the position.

This article is based on a report prepared by a special committee and presented to the annual meeting of the Railway Fuel & Traveling Engineers Association at Chicago September 11.

What the Job Comprises

Historically the road foreman has been responsible to the chief mechanical officer. When a man is appointed road foreman-trainmaster, he works under and reports to the superintendent, and to the mechanical department on conditions of equipment and other mechanical matters. Both engine and train crews come under his jurisdiction. He conducts the prescribed examinations to qualify firemen for engineers, and trainmen for conductors. He conducts biannual rules examinations.

His assignment is usually not on a main-line district. The territory can consist of fifty to several hundred miles of line and may include some terminals. He spends as much time on the road as is consistent with his duties—instructing engine crews in proper train handling, proper operation of diesel locomotives and trouble-shooting on these locomotives. He also instructs the train crews in proper performance of their duties.

He discusses operations with the superintendent and with terminal supervision; accompanies tool cars to derailments; supervises and directs traffic around derailments; and assists in planning methods of re-railing equipment to prevent damage. He inspects stations and freight-houses, and must insure safe, efficient and economical performance of trains and of yard operations.

Proper switching methods must be prescribed. This officer must see that cars are handled to avoid damage to lading and equipment and that perishable traffic is expedited. Changes in the routine of yard and road crews must be made to meet changing conditions. He should attend clubs, staff meetings, and traffic meetings in his territory and should conduct employee safety meetings.

Handling grievances requires a thorough understanding of the contracts under which the employees he supervises are working. He conducts investigations involving men under his jurisdiction when that becomes necessary. He interviews prospective employees—hiring both firemen and trainmen. Such a supervisor must keep himself constantly available for any emergencies that might arise.

A man assigned to one of these jobs will be kept busy. The trend seems to be that younger men are assigned to these positions. Road foremen or assistants should have good personalities, a fair knowledge of the handling of cars and of terminal and train operations. Road foremen can then successfully assume the trainmaster's duties.

LINE OFFICER ACCEPTANCE is the key to success in any personnel program. The CPR group shown here is typical of those which have handled the road's supervisory appraisal job—(left to right) A. L. McGregor, general superintendent, Ontario District; W. F. Saunders, personnel representative, Toronto; O. R. Barefoot, superintendent, motive power and car department, Toronto; J. N. Fraine, general manager, Eastern Region; and P. J. Johnson, assistant superintendent, Motive Power and Car Department, Toronto.

How Good Is the Supervisor?

An appraisal system helps the CPR's Operating Department to discover and keep tab on officers with a future

Measuring a supervisor's performance in the handling of his job is, at best, no easy task. It is possibly less difficult to establish upper and lower limits—whether the man is "outstanding" or "unsatisfactory"—than it is to place him at some point between these extremes. Yet, how important to both the supervisor and his company it is that such placement be made.

Is the supervisor only "fair," is he "average," or "above average"? What qualities does he have, or not have, that make him the kind of job performer that he is? Does he have capacity for greater responsibility, either now or after further experience? What can management do to insure his continued development, not only for future assignments, but, more important, for better performance in his present assignment?

To try and answer such questions as these, the Operating Department of the Canadian Pacific has been engaged for several months in an intensive management development program. The scope of the undertaking is broad; but so are its possible . . .

Management's View

"Experience has shown that a properly conducted appraisal of anyone by his superiors has definite benefits to all concerned—the individual, those who appraise him and the organization in general.

"By means of personal interviews, arranged specifically to discuss these appraisals, each individual becomes more conscious of how his work is regarded by those in charge, and in this way our various levels are brought closer together.

"The individual, because he has been given an account of his stewardship, can very often take steps for improvement or can at least have the assurance that others believe he is using the best methods of doing his job."

—N. R. Crump
President, CPR

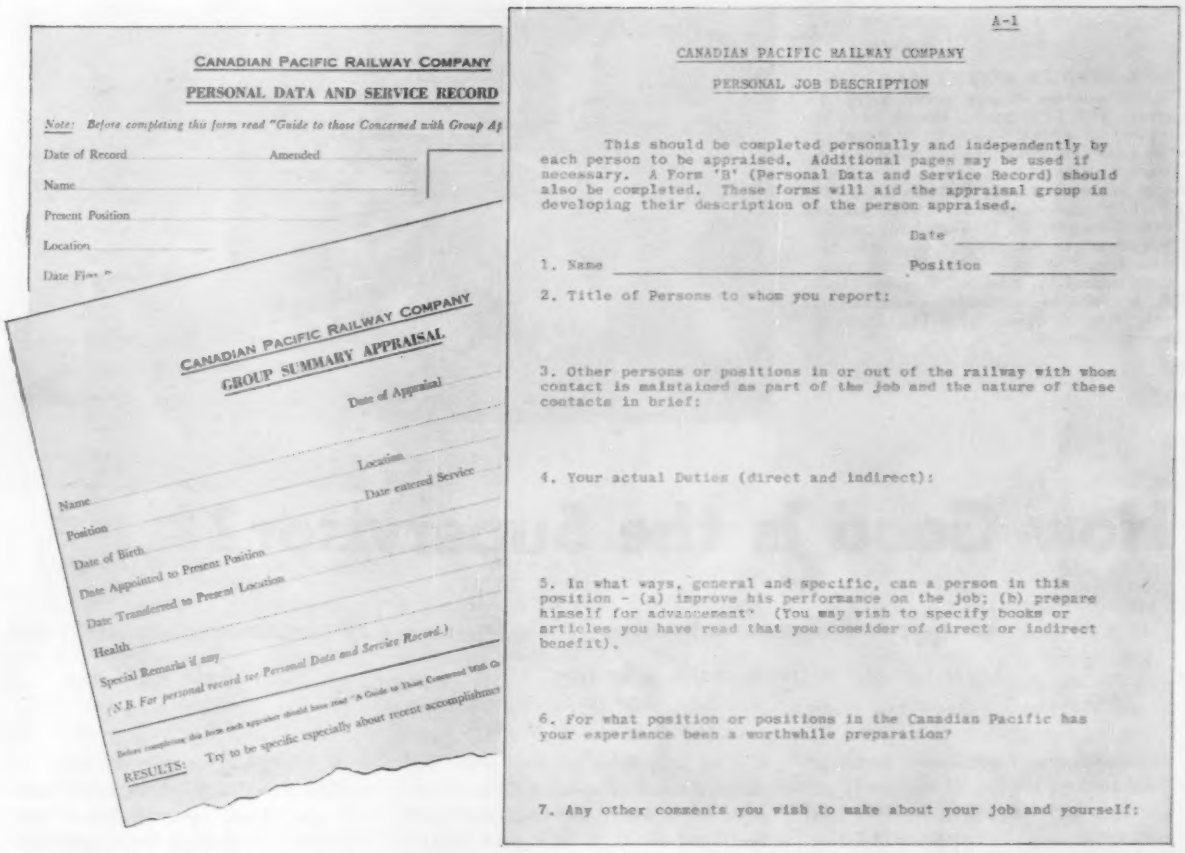
Objectives:

- Over the long run, CPR management believes the development program will result in improved service at reduced cost, and a higher return on investment.
- As an intermediate goal, the program aims at improved planning and higher morale.
- Everyday results include renewed attention to the specific tasks of supervision, better technical performance, improved interdepartmental cooperation, facilitation of promotion-from-within policies, creation of management "reserves," and the broadening of key men in "middle management."

What the Program Is

The essential feature of the Canadian Pacific's program is group appraisal of individual supervisors—in short, a systematic cataloging of each officer's strong and weak points. It is a means by which the railroad compiles a central file of *evaluated* knowledge of operating department supervisors, regardless of location. (On the CPR, the Operating Department includes mechanical and engineering officers as well as those charged with actual operation.)

Nor does the railroad, as an organization, benefit alone. As CPR President N. R. Crump has pointed out, the individual supervisor receives, if anything, greater benefit. The appraisal of an officer by his immediate superiors can mirror to him his own virtues and shortcomings. Fairly done, it can encourage him to develop and demonstrate his abilities as well as strengthen his



CANADIAN PACIFIC RAILWAY COMPANY

PERSONAL DATA AND SERVICE RECORD

Note: Before completing this form read "Guide to those Concerned with Group Ap

Date of Record ..... Amended .....

Name .....

Present Position .....

Location .....

Date First ...

CANADIAN PACIFIC RAILWAY COMPANY

GROUP SUMMARY APPRAISAL

Date of Appraisal .....

Name ..... Location .....

Position ..... Date entered Service .....

Date of Birth .....

Date Appointed to Present Position .....

Date Transferred to Present Location .....

Health .....

Special Remarks if any .....

(N.B. For personal record see Personal Data and Service Record.)

Before completing this form each appraiser should have read "A Guide to Those Concerned With Gr

RESULTS: Try to be specific especially about recent accomplishmen

A-1

CANADIAN PACIFIC RAILWAY COMPANY

PERSONAL JOB DESCRIPTION

This should be completed personally and independently by each person to be appraised. Additional pages may be used if necessary. A Form 'B' (Personal Data and Service Record) should also be completed. These forms will aid the appraisal group in developing their description of the person appraised.

Date _____

1. Name _____ Position _____

2. Title of Persons to whom you report:

3. Other persons or positions in or out of the railway with whom contact is maintained as part of the job and the nature of these contacts in brief:

4. Your actual Duties (direct and indirect):

5. In what ways, general and specific, can a person in this position - (a) improve his performance on the job; (b) prepare himself for advancement? (You may wish to specify books or articles you have read that you consider of direct or indirect benefit).

6. For what position or positions in the Canadian Pacific has your experience been a worthwhile preparation?

7. Any other comments you wish to make about your job and yourself:

FORMS LIKE THESE, used at all locations, provide a standard outline for appraising operating supervision on the CPR. Final data on each supervisor, recorded on the Group Summary Appraisal, is kept at the general offices.

weak points. CPR management considers this emphasis on the individual a decided "plus factor" in the appraisal program.

In actual practice, the appraisal of an individual is handled in four principal stages—the group summary appraisal, review by higher management, the carry-back interview with the individual, and subsequent action for improvement. Each of these steps is recorded on a single four-page form, identified as the "Group Summary Appraisal." The completed form for each supervisor is kept in locked files in Montreal.

There is, of course, some preliminary work that precedes any appraisal. The individual supervisor must complete a comprehensive "personal data and service record" form, providing his appraisers with background knowledge of himself and his job. This supplements information from the man's staff record card as well as other data which his appraisers may have from personal contacts.

In addition, the individual completes a "Personal Job Description" (see picture). Two key questions on this form are designed to draw from the man a preliminary analysis of his own ability. He is asked how he can improve his on-the-job performance and prepare for advancement; and to what higher positions he feels he could rightly be promoted on the basis of present experience.

The initial test of the new program was carried out in the mechanical branch of the Operating Department. It covered personnel from locomotive foremen and comparable car foreman up to and including superintendents of motive power. In major repair shops and at headquarters, persons of comparable rank were included.

How the Plan Works

Later, the appraisals were extended to the engineering branch and to operations (per se). Staff help was kept at a minimum throughout, and all appraisal work was performed by line personnel.

When an individual comes up for appraisal he fills out, first of all, the job description and personal data and service record forms. Then, at a time convenient to supervisors concerned, a group, usually three or four, meet together to prepare the appraisal.

The CPR handles the selection of this appraising group with great care. Each member should know the man and know something of his performance on the job. Each is also superior in rank to the person being appraised in order to eliminate any suspicion of unfairness or of competition for a particular job. Staff personnel have concerned themselves, in his respect, that the appraisals be completely fair.

The man's immediate superior serves as "chairman" of his appraisal group, but it has been the road's experience that opinions recorded are the unanimous findings of the group. A staff representative gen-

erally serves as group secretary, helping insure that a complete description of the man is obtained and that significant areas are not omitted in the discussion.

The use of a man's immediate superiors to make an appraisal provides these officers with a more rounded description of the man, what he does and how he does it. This generally has had a favorable effect on the morale of those being appraised.

An added benefit also accrues to members of the appraisal team and the Review Board which subsequently looks over their findings. Supervisors find they must think objectively about people and about the framework in which they work. No one member of a group can get away with describing people as "all good" or "all bad" when his opinions are challenged by others who know the man being appraised in a different way. As a result, the quality of appraisals continues to improve.

The work of an appraisal group comprises, at least in the beginning, a rather general discussion. The secretary records highlights from the discussion, later reading them back as "Results," "Methods," or "Personal Characteristics." The end result is a concise description of the individual in relation to his job.

In addition to describing the person being appraised, the group records his "Strongest Qualifications" (usually one or two), "Areas in Which the Individual Could Improve Most" and "Any Other Factor or Characteristic Which Might Hinder His Future Development." The group then rates him for his present position. Five choices are given: Outstanding, Above Average, Satisfactory, Fair and Unsatisfactory. Among a large group, such as superintendents, it is natural that all headings are used on occasions. The top and bottom categories are of course used infrequently.

The appraisal group then makes a recommendation on promotability under one of five headings: Immediately Promotable, Promotable After Further Experience, Promotability to Be Reconsidered at Next Appraisal, Promotable Only in an Emergency, and Not Being Considered for Promotion. A common interpretation of these phrases has been agreed upon by staff men who help with the appraisals.

Where the recommendation for "Promotability" is made, the position or positions to which he is promotable are listed. Under Potential, the group record what possibilities they see in this man beyond any immediate promotion or perhaps even in a different department.

Finally the group recommend what action they believe the individual, either by himself or aided by the company, can take to improve himself on his job or prepare for future advancement.

When the appraisals for an entire section are completed, the supervisor of the section forwards them to a Review Board.

A Vital Step

This review group consists of the next higher supervisor and two other officers. They review these appraisals in detail, make a final recommendation on each man's promotability, then conclude with an appraisal of the section head himself. One consideration in this latter appraisal is the judgment, knowledge and skill reflected in appraisals of men in the section.

The Review Board contributes still another benefit. Its members are able to offer suggestions and guidance to individual section heads on how best to carry out the next step—"Action for Improvement." The board also gives advice on how to handle personal interviews, particularly in cases where the attitude and personality of the person appraised is the thing that should be improved.

After each appraisal has been reviewed it is discussed by the supervisor with the person appraised. The CPR regards this as the most important step in the procedure. Through these interviews individuals learn where they stand and how they can improve. This is the key to upgrading the quality of supervision throughout the railroad.

Appraisals are repeated at approximately two year intervals or, in some cases, six months after a man has been promoted or transferred. In addition to the work done with present supervision, the road has made similar appraisals of operating assistants. These men are candidates for the position of assistant superintendent, and are working on the regions under a three-year training program. In this case, appraisals are repeated following each major assignment or at six-month intervals.

CAN YOU MEASURE AN OPERATING JOB?

One outgrowth of the Canadian Pacific's appraisal work in the Operating Department has been the development of a composite "job description" for the position of assistant superintendent—a designation which that road uses instead of the more usual term trainmaster.

The description is in five major sections and can be stated as questions:

1. To whom does the assistant superintendent report?
2. Who reports directly to him?
3. What are his duties?
   (a) Safe and efficient operation
   (b) rules
   (c) Economics and business
   (d) Safety, loss and damage prevention
   (e) Office work
   (f) Personnel
   (g) Miscellaneous — including "keeping informed"
4. How can on-the-job-performance be measured?
   (a) Results
   (b) Methods
   (c) Personal characteristics
5. What "special qualifications" are desirable? (This section can serve also as a guide in the selection and recommendation of new assistant superintendents.)

Major sections in the assistant superintendents' job description are broken down into specific points. For example, under Part 4, which deals with on-the-job performance, there are a dozen items under the category of "Results." Under "Methods" the breakdown is similar. It covers such matters as morale, discipline, getting along with others, organizing and planning work, initiative, and ability to develop men and to get the most from them.

(Continued from page 13)
and other regulatory bodies for their alleged failure to recognize "the basic facts of transportation," and, challenging any assertion that bus transport is a subsidized industry, protested against the various taxes levied against bus operators.

A more restrained view of the bus industry's future was voiced by Anthony F. Arpaia, chairman of the ICC, who warned that growth in common carrier transportation business had to be in the form of travelers diverted from the use of private automobiles.

"More people are going places," Mr. Arpaia said, "but public transportation is getting fewer of them. This poses one of the most portentous problems facing our country today."

Organizations

American Association of Passenger Traffic Officers.—Annual meeting will be held in the Fontainebleau Hotel, Miami Beach, Fla., October 10-12.

American Institute of Electrical Engineers.—A land transportation session is scheduled for October 1, the opening day of the fall general meeting, at the Morrison Hotel, Chicago, at which five railroad papers will be presented—three by representatives of the General Electric Company, one by E. R. Hauer and C. M. Angel of the Chesapeake & Ohio, and one by P. H. Hatch of the Long Island.

Atlantic States Shippers Advisory Board.—The 100th regular meeting will be held in the Lord Baltimore Hotel, Baltimore, October 3-4. Speaker at a luncheon on the 4th will be W. Arthur Grotz, president, Western Maryland.

Chamber of Commerce, Kansas City, Mo.—Lee R. Cowles, traffic manager, Standard Oil Company (Indiana), will retire October 1 to become transportation commissioner of the Chamber of Commerce.

Eastern Association of Car Service Officers. — The November 1-2 meeting will be held in the Southern Hotel, Baltimore, and not in the Sheraton-Belvedere Hotel as originally planned.

Federation for Railway Progress.—John F. Nash, vice-president—operations, New York Central, R. J. Stone, vice-president—operations, St. Louis-San Francisco, and Bernard E. Young, assistant to the president, Southern, have been appointed to the executive council. In making the announcement, FRP Chairman James G. Lyne said: "The federation is most fortunate to have these experienced men representing the 11,000 supervisory employees who are members of the federation. The appointees will be of inestimable value in helping the council establish the future policy of FRP."

Railroad Enthusiasts, New York Division.—R. M. Pilcher, assistant engineer tests, Norfolk & Western, will talk on N&W motive power at a meeting at 8 p.m., September 28, in the YMCA Auditorium, Pennsylvania Station.

Supply Trade

Allied Steel Castings Company has appointed **John H. McCartney** of Philadelphia, eastern representative, and **Dolph R. Elmore** of Washington, D.C., southeastern representative.

O. S. Laing, district manager at Chicago for the transportation products sales department of **Stran-Steel Corporation,** has been appointed district manager of the Omaha-Denver-Twin Cities area, at Minneapolis. **E. W. Fitzgerald** will have charge of the Chicago area. **H. T. Doughty,** design engineer, has been named chief engineer, transportation products department. **J. D. Kennedy,** formerly with **General Electric Company,** has been appointed district manager at Atlanta, Ga., and **Philip R. Lochner,** formerly regional sales manager for **Union Asbestos & Rubber Co.,** district manager at New York. **J. K. Sparrow,** district manager at Louisville, Ky., has been transferred in the same capacity to Philadelphia, and **T. E. Zick,** sales representative, has been transferred from Detroit to Cleveland.

R. FLOYD McCALL, manager, railroad sales, Motorola Communications and Electronics, Inc., has been appointed vice-president and manager railroad radio product sales.

James L. Hamilton, Jr., sales engineer for **Mead-Morrison Division, McKiernan-Terry Corporation,** has been appointed western sales manager at Chicago, succeeding **S. F. Knight,** retired.

OBITUARY

John Thomas, former vice-president-engineering of Alco Products, Inc., died of a heart attack August 31, at Miami, Fla.

Edwin B. Meissner, 71, president of the St. Louis Car Company, died at his home in Clayton, Mo., September 10.

Financial

Dividends Declared

AKRON, CANTON & YOUNGSTOWN. — 50¢, semiannual, payable October 1 to holders of record September 15.

BEECH CREEK.—50¢, quarterly, payable October 1 to holders of record September 14.

BESSEMER & LAKE ERIE.—$1.50 preferred, 75¢, semiannual, payable October 1 to holders of record September 15.

CENTRAL OF GEORGIA.—5% preferred A, $1.25, quarterly; 5% preferred B, $1.25, quarterly; both paid September 20 to holders of record September 11.

CHICAGO GREAT WESTERN. — 5% preferred, 62½¢, quarterly, payable September 28 to holders of record September 18; common, 35¢, quarterly, payable October 3 to holders of record September 18.

CHICAGO & EASTERN ILLINOIS.—common, 25¢, quarterly, payable September 29 to holders of record September 21.

MAHONING COAL.—$7.50, payable October 1 to holders of record September 25.

MINNEAPOLIS, ST. PAUL & SAULTE STE. MARIE.—50¢, semiannual; extra, 25¢; both payable October 31 to holders of record October 17.

MISSOURI-KANSAS-TEXAS.—7% preferred, 50¢ accumulated, payable October 1 to holders of record September 21.

NORTHERN PACIFIC.—25¢, quarterly, payable October 26 to holders of record October 5.

NORWICH & WORCESTER.—8% preferred, $2, quarterly, payable October 1 to holders of record September 15.

PIEDMONT & NORTHERN.—$1.25, quarterly, payable October 22 to holders of record October 5.

PITTSBURGH & LAKE ERIE.—$1.50, quarterly, payable October 15 to holders of record October 1.

PROVIDENCE & WORCESTER.—$2.50, quarterly, payable October 1 to holders of record September 17.

SEABOARD AIR LINE.—62½¢, quarterly, payable September 27 to holders of record September 14.

SOUTHERN.—Mobile & Ohio stock trust, $2, semiannual, payable October 1 to holders of record September 14.

TEXAS & PACIFIC.—common, $1.25, quarterly, 5% non-cumulative preferred, $1.25, quarterly; both payable September 28 to holders of record September 24.

WESTERN MARYLAND. — 7% 1st preferred, $1.75, quarterly; 4% non-cumulative 2nd preferred, $1, quarterly; both payable September 29 to holders of record September 21.

HIGHLIGHTS FROM ANNUAL REPORTS OF 36 RAILROADS †

Railroad		Operating Revenues	Operating Expenses	Fixed Charges	Net Income	Current Assets*	Current Liabilities*	Long Term Debt*
Alabama Great Southern	1955	$ 20,572,170	$ 13,937,230	$ 291,139	$ 4,237,850	$ 9,166,075	$ 6,259,148	$ 8,898,500
	1954	17,486,056	12,961,885	306,534	3,160,439	5,622,230	4,972,820	9,752,100
Atlanta & West Point	1955	3,563,073	3,047,329	25,976	225,186	1,952,150	633,507	881,749
	1954	3,891,590	3,302,503	29,324	194,859	2,179,712	806,786	954,790
Atlantic Coast Line	1955	158,891,959	132,157,583	7,023,994	13,850,531	52,851,863	21,513,648	181,700,240
	1954	152,013,278	127,238,851	6,900,903	11,747,486	46,591,034	23,169,074	178,823,962
Belt of Chicago	1955	14,358,561	9,194,855	1,983,502	428,856	5,192,921	3,359,955	2,739,539
	1954	12,957,245	8,628,071	1,785,922	185,792	4,667,973	2,500,296	3,156,311
Charleston & Western Carolina	1955	6,366,319	5,169,367	378,169	580,763	1,783,080	1,482,979	8,745,338
	1954	6,603,687	5,356,973	395,344	455,841	1,498,839	1,050,986	9,323,793
Chicago, St. Paul, Minneapolis & Omaha	1955	33,307,572	28,118,498	2,481,504	3,109,624d	5,870,799	5,360,699	52,520,485
	1954	33,017,404	28,188,992	2,508,293	2,900,166d	5,933,083	4,604,144	53,658,832
Chicago, South Shore & South Bend	1955	7,445,039	5,325,222	649,178	363,593	3,364,577	1,683,565	.....
	1954	6,922,842	5,164,283	621,962	290,412	2,815,735	1,306,862	.....
Cincinnati, New Orleans & Texas Pacific	1955	47,648,438	28,432,328	1,983,634	7,720,125	23,558,403	19,911,779	3,446,400
	1954	41,747,319	26,430,199	1,951,425	5,297,605	24,413,249	18,362,170	5,125,880
Clinchfield	1955	19,996,870	12,041,995	2,421,471	4,892,674	6,589,401	17,800,125	12,305,950
	1954	20,875,383	12,666,313	2,453,602	3,756,912	6,453,403	17,001,648	12,797,813
Colorado & Southern	1955	15,560,594	11,802,605	152,794	1,497,449	6,233,429	4,412,432	18,021,469
	1954	14,424,059	11,403,441	168,705	1,316,918	6,389,899	3,269,077	18,699,338
Detroit & Mackinac	1955	2,202,067	1,521,477	62,077	306,173	768,548	648,831	1,569,610
	1954	2,003,764	1,458,164	65,553	282,691	507,311	461,082	1,797,599
Duluth, Missabe & Iron Range	1955	52,280,337	29,869,965	448,116	9,730,790	19,684,323	17,904,382	14,168,590
	1954	39,074,920	28,579,110	544,787	4,401,346	10,969,863	10,357,090	17,733,821
Duluth, South Shore & Atlantic	1955	7,677,757	6,307,039	107,168	421,806	2,724,703	1,106,963	7,250,980
	1954	6,799,022	6,048,351	109,067	None	2,524,856	1,041,470	6,978,823
Florida East Coast	1955	34,273,094	25,422,721	2,925,464	907,933	24,799,792	4,716,640	63,821,155
	1954	31,682,030	26,888,693	2,927,323	4,311,955d	20,946,764	2,566,557	64,648,302
Fort Dodge, Des Moines & Southern	1955	2,323,710	1,830,241	156,453	267,852	550,540	554,852	3,728,906
	1954	2,230,426	2,139,992	141,193	192,577d	451,877	615,268	3,741,253
Fort Worth & Denver	1955	23,264,796	18,346,669	1,073,763	878,646	5,091,773	3,905,759	21,452,749
	1954	23,701,489	17,431,267	1,105,330	1,765,660	6,011,784	4,290,448	22,409,982
Georgia	1955	7,528,001	6,845,203	718,646	55,229	3,289,739	1,138,742	16,094,176
	1954	8,448,511	7,413,594	724,521	120,041	3,366,605	1,081,471	16,466,072
Georgia Southern & Florida	1955	10,723,009	7,698,702	345,254	23,644d	2,689,660	1,867,195	7,139,013
	1954	9,596,307	7,092,390	327,546	135,765d	2,772,748	1,798,360	6,530,758
Green Bay & Western	1955	4,477,741	3,109,276	20,776	474,103	1,519,194	1,640,386	10,100,000
	1954	4,338,099	3,379,583	18,712	263,053	1,332,798	1,421,701	10,100,000
Illinois Terminal	1955	12,251,475	9,664,604	542,311	83,493	4,717,809	3,529,238	14,941,121
	1954	10,983,916	9,464,043	562,414	197,400	2,941,966	2,144,652	14,284,951
International Railways of Central America	1955	16,656,764	13,309,125	240,901	1,663,024	8,009,172	1,621,421	6,023,907
	1954	13,785,952	12,693,643	270,175	369,277	6,935,225	1,028,763	5,377,597
Louisiana & Arkansas	1955	28,497,951	15,602,222	719,654	5,635,075	19,011,931	8,540,346	19,409,074
	1954	25,554,568	15,297,917	817,984	4,868,691	17,861,488	6,862,512	24,831,477
Maine Central	1955	24,890,572	19,321,762	1,348,966	1,113,809	8,054,868	5,235,163	27,392,282
	1954	24,247,450	19,912,742	1,364,823	682,114	7,444,789	4,739,953	25,691,495
Missouri-Kansas-Texas	1955	73,250,559	57,643,810	3,027,495	3,110,777	22,324,149	11,199,275	96,477,006
	1954	72,548,363	56,310,698	2,987,333	4,019,829	24,564,430	11,724,157	94,994,547
Missouri Pacific	1955	300,077,947	232,332,611	15,637,977	14,595,039	124,412,061	63,173,996	623,930,429
	1954	285,394,447	225,464,802	18,017,301	11,923,857	100,068,358	46,907,795	617,121,769
New Orleans & Northeastern	1955	13,273,596	7,236,234	7,423	2,509,043	7,656,017	6,615,609	188,000
	1954	11,808,221	7,545,630	14,117	1,717,251	4,183,490	5,303,597	512,480
New York, Susquehanna & Western	1955	5,665,169	4,304,801	195,171	131,161d	3,599,181	3,396,736	8,964,155
	1954	5,873,782	4,303,279	224,592	45,986	3,691,699	3,189,773	9,169,552
Ontario Northland	1955	13,957,571	11,696,016	582,505	1,528,207	6,298,967	2,886,710	13,226,000
	1954	13,327,934	11,504,653	620,964	964,257	5,840,320	2,442,918	14,434,000
Peoria & Eastern	1955	6,324,697	4,206,756	244,233	791,609	1,453,967	175,747	8,669,700
	1954	6,255,558	4,237,241	261,090	778,600	1,159,447	180,760	8,906,700
Pittsburgh & Lake Erie	1955	41,301,062	31,703,477	795,146	11,805,027	26,809,090	12,371,019	24,742,000
	1954	33,235,723	31,866,517	920,251	8,517,681	13,011,118	6,187,476	28,796,000
Pittsburgh & West Virginia	1955	8,624,862	6,318,518	429,883	873,970	4,409,764	1,854,884	10,962,500
	1954	7,306,161	5,844,913	467,582	852,758	4,307,322	1,187,491	11,765,500
St. Louis Southwestern	1955	66,952,021	39,404,111	815,481	10,700,906	39,161,141	16,712,576	23,028,000
	1954	59,070,256	37,532,809	828,138	16,661,138	39,276,008	15,316,936	23,478,000
Southern	1955	276,913,414	181,029,631	13,357,969	37,993,249	138,773,391	79,482,164	271,809,565
	1954	249,079,701	176,101,145	13,465,146	26,262,680	133,044,029	69,700,123	277,048,270
**Toledo, Peoria & Western	1955	7,033,688	4,410,225	67,331	767,356	3,563,852	2,184,430	1,595,816
	1954	6,806,211	4,466,117	71,747	641,168	3,024,497	2,074,514	1,694,340
Western Maryland	1955	47,425,936	31,941,412	2,523,197	8,224,636	17,289,726	11,913,025	76,448,555
	1954	41,418,378	31,836,456	2,714,503	7,225,463	19,360,090	7,351,586	70,334,659
**Western Pacific	1955	53,749,777	39,379,098	1,069,960	4,605,540	23,129,199	11,743,040	57,958,933
	1954	48,118,749	37,174,026	1,317,765	4,313,953	20,579,047	7,851,988	56,092,814

† Supplementing previous lists appearing in Railway Age, June 18, p. 53, and Apr. 30, p. 23.
* On December 31.
d Deficit.
r Revised.
** Correction.

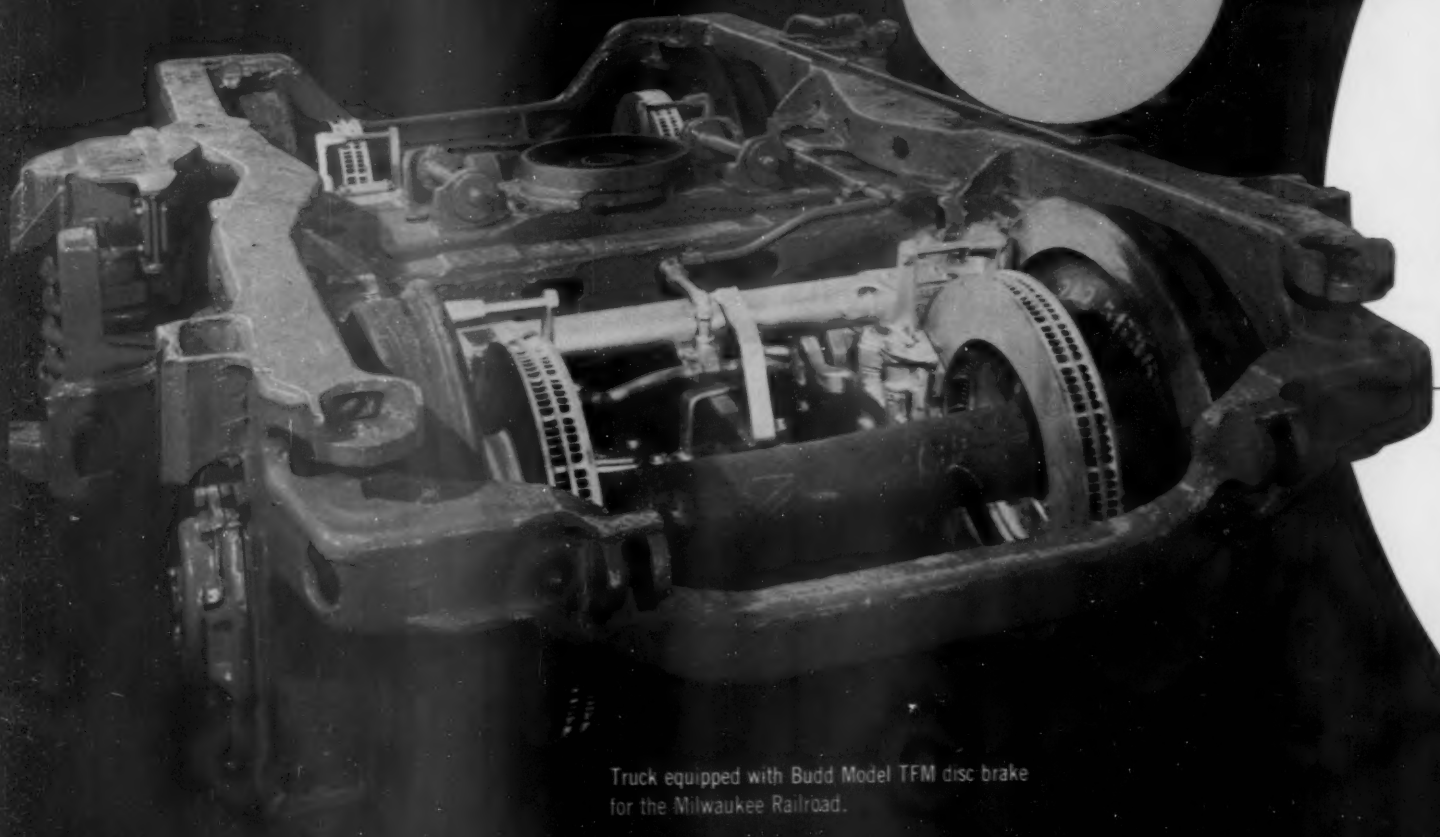
introducing

new

Budd

disc brake

MODEL TFM



Truck equipped with Budd Model TFM disc brake
for the Milwaukee Railroad.

Close-up of mounting, showing brake welded directly to the frame

FRAME MOUNTED BRAKE FOR SHORT WHEEL BASE TRUCKS BEING INSTALLED ON 114 MILWAUKEE RAILROAD CARS

Model TFM is a companion to the widely used Model CF. It was designed especially for brake conversion programs . . . to provide railroads with Budd disc brake economy and performance . . . where the trucks have a short wheel base and cannot readily accommodate Model CF.

These Model TFM brakes were tested fourteen months on a car in Milwaukee Road service. During that time exactly one change of brake shoes was made—at 90,000 miles. 114 Milwaukee Railroad cars are now being equipped with it.

The brake offers economies in first cost and installation costs, and, combined with its lighter weight, its principles are particularly adaptable to the new, low cost, lightweight cars. Complete information may be obtained from any Budd sales office, or by writing to The Budd Company, Philadelphia 15.

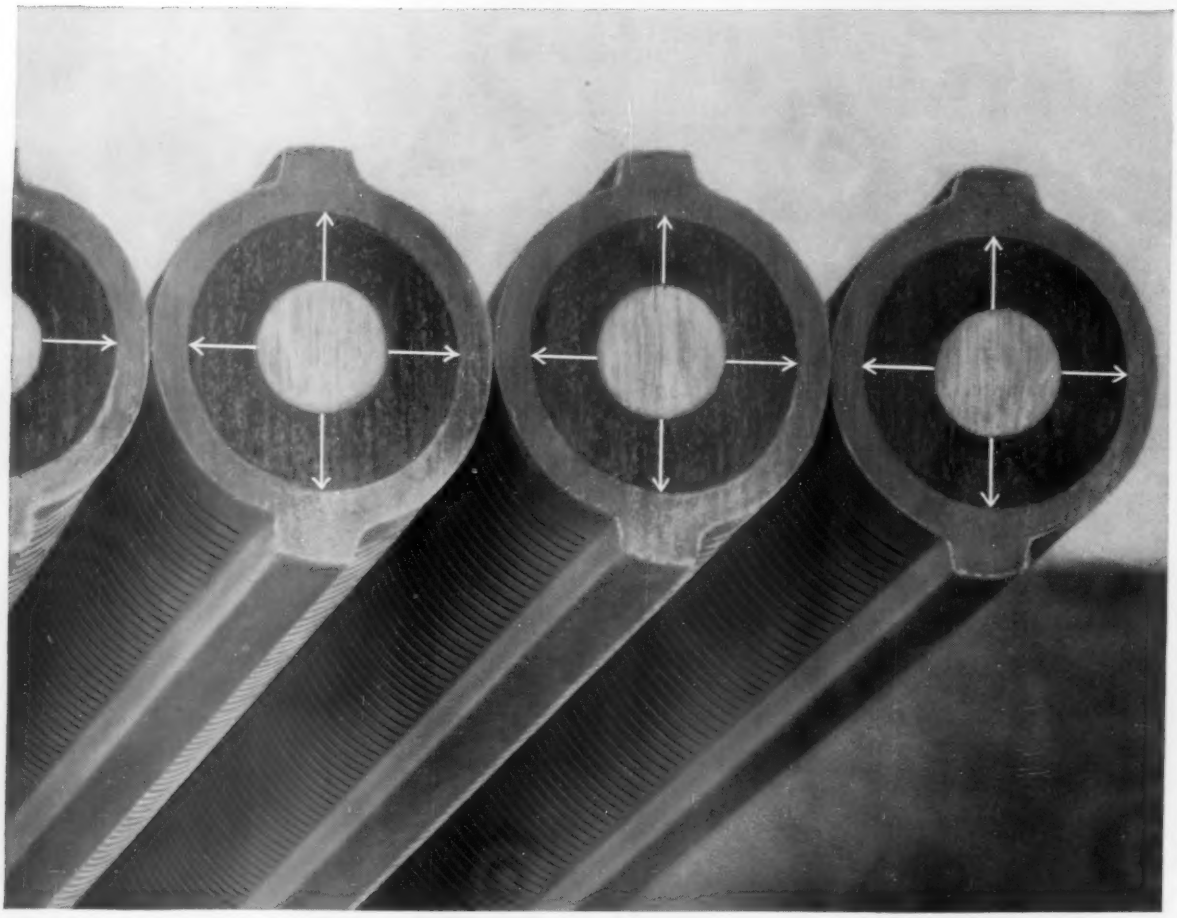
DURING THE PAST 10 YEARS 1800 CAR SETS OF BUDD DISC BRAKES HAVE BEEN SPECIFIED EITHER FOR NEW CARS OR TO REPLACE OTHER TYPES BECAUSE . . .

- They stop trains quicker, without wheel damage
- They provide smooth, silent stops
- They hold speeds indefinitely on any grade of any length
- They reduce maintenance costs
- They save weight . . . stay adjusted . . . increase wheel life
- They eliminate speed governor control
- They eliminate slack adjusters

Budd

EXIDE-IRONCLAD BATTERIES

For railway car lighting and air conditioning



Power tubes expand without shedding — preserve battery life

BATTERY FOR RAILWAY CAR LIGHTING AND AIR CONDITIONING. Model EHL. Write for Bulletin No. 5168.

Every time you discharge a storage battery, the active material on the positive plates expands. But the plate grids don't expand. This is basic.

On most batteries, the expanding active material tends to shear off from the nonexpanding grid every time the action takes place. But this can't happen in the Exide-Ironclad Battery. The reason is simple.

Active material is formed concentrically around the spinelike grid and held inside the plastic tubes. Expansion is predominantly in an outward direction—hence no shearing. Active material remains firmly locked to the underlying grid structure. And the flexible plastic tubes yield and take up as needed.

This extra protection against shedding of active material is only one of the many reasons for the long life of Exide-Ironclad Batteries. When you order heavy duty batteries, or the equipment requiring them, be sure to specify Exide-Ironclad. Write for detailed bulletin. Exide Industrial Division, The Electric Storage Battery Company, Philadelphia 2, Pa.

Exide®

Railway Officers

ERIE.—Richard S. Tibbits appointed industrial engineer, Cleveland, succeeding **J. S. Parsons, Jr.** (Railway Age, Sept. 10, p. 46).

Frank K. Neild appointed division storekeeper, Susquehanna, Pa., succeeding **John J. Enright,** who retired September 15.

GULF, MOBILE & OHIO.—Wilkes C. Robinson appointed an attorney, Mobile, Ala.

MERIDIAN & BIGBEE.—W. W. Sullivan elected chairman of the board at Meridian, Miss., to succeed **John Stevens, Jr.,** resigned. **R. H. Lorenz,** senior vice-president at Menasha, Wis., elected president to succeed Col. Sullivan. **Robert A. Frantz,** formerly of the Chicago office, appointed general manager—operations. **W. M. Shoemaker,** general agent at Jackson, Miss., appointed general traffic manager.

NORTHERN PACIFIC. — Otto Kopp, general freight traffic manager in charge of sales and service, St. Paul, appointed vice-president in charge of traffic there, succeeding **Frank J. Berry,** retired (Railway Age, Sept. 3, p. 46). Mr. Kopp's successor is **W. J. Luchsinger,** eastern freight traffic manager, New York.

W. J. Luchsinger

George C. Reinhardt, general freight agent, New York, succeeds Mr. Luchsinger, and in turn is replaced by **John A. Marshall,** assistant general freight and passenger agent, Billings, Mont. Mr. Marshall is succeeded by **Walter Westman,** general agent, Pittsburgh, who in turn is replaced by **Carl A. Schelly,** commercial agent, San Francisco.

RUTLAND.—Guy D. Larrabee appointed vice-president — sales and service, Rutland, Vt., succeeding **Ralph L. Andreas,** who resigned recently to become traffic manager of the Standard Oil Company of Indiana (Railway Age, Aug. 27, p. 36). Mr. Larrabee was formerly general eastern freight agent of the **Rock Island** at New York. **Ray I. Nova,** district sales representative, Western region, promoted to district sales manager, Chicago. **John D. Lewis,** district sales representative, Western region, Cincinnati, promoted to district sales manager there. **Charles J. Reagan,** district sales representative, Northeast region, Boston, transferred to Portland, Me.

Guy D. Larrabee

SOUTHERN PACIFIC.—C. M. Biggs, freight traffic manager, Chicago, appointed general traffic manager there, in charge of Eastern and Midwestern off-line offices, succeeding **Charles T. Collett,** who retired September 1 after 50 years of railroad service. **C. E. Ward,** assistant freight traffic manager of SP's lines in Texas and Louisiana, Houston, succeeds Mr. Biggs, and in turn is replaced by **E. E. Miller,** assistant freight traffic manager, Central district, San Francisco. Mr. Miller's successor is **E. N. Brown,** assistant to the general traffic manager, Chicago, who in turn is succeeded by **J. J. Harr,** district freight agent, San Francisco. **D. F. Diemer,** assistant district freight agent, San Francisco, named to succeed Mr. Harr.

C. M. Biggs

C. E. Ward

WABASH.—Arthur W. Richardson, assistant vice-president—traffic, St. Louis, elected vice-president—traffic there, succeeding **Leo E. Clarahan,** retired (Railway Age, Aug. 6, p. 49).

Arthur W. Richardson

WESTERN PACIFIC. — Robert A. Henderson, trainmaster, Keddie, Cal., transferred to Milpitas-San Jose, Cal., to replace **Robert B. Redus,** assistant trainmaster, promoted to trainmaster, Keddie. **George M. Lorenz,** trainmaster, Salt Lake City, transferred to Portola, Cal., succeeding **Virgil H. Edwards,** named terminal trainmaster, Oakland, Cal. Mr. Lorenz's successor is **Robert C. Madsen,** transferred from Oroville, Cal., who in turn is replaced by **L. W. Breiner,** transferred from Elko, Nev. **Ken P. Woods,** trainmaster, Sacramento Northern, Marysville, Cal., appointed trainmaster, WP, Elko, to succeed Mr. Breiner. **Virgil H. Edwards,** trainmaster, Portola, named terminal trainmaster, Stockton, Cal., replacing **L. D. Michelson,** transferred to Oakland.

OBITUARY

Leslie L. Trihey, general agent, passenger department of the **Burlington** at Minneapolis, died September 12 in that city.

C. P. Varney, retired executive representative of the **Rock Island,** died September 13 at Minneapolis.

REVENUES AND EXPENSES OF RAILWAYS

(Dollar figures are stated in thousands; i.e., with last three digits omitted)

MONTH OF JULY AND SEVEN MONTHS OF CALENDAR YEAR 1956

Name of Road		Average mileage operated during period	Operating Revenues: Freight	Pass.	Total (inc. misc.) 1956	Total (inc. misc.) 1955	Operating Expenses: Maint. Way and Structures: Total 1956	Total 1955	Deprec. and Retirements	Maint. Equipment: Total 1956	Total 1955	Deprec. and Retirements	Traffic	Transportation	Total 1956	Total 1955	Operating ratio 1956	Operating ratio 1955	Net from railway operation	Railway tax accruals	Net railway operating income 1956	Net railway operating income 1955
Akron, Canton & Youngstown	July	171	$389	....	$400	$478	$76	$68	$6	$68	$53	$14	$39	$147	$374	$353	94.4	74.0	$23	$12	$—15	$36
	7 mos.	171	3,375	....	3,452	3,463	500	482	39	445	411	95	298	1,060	2,621	2,431	75.9	70.2	831	391	242	359
Atchison, Topeka & Santa Fe	July	13,124	42,724	$4,967	52,303	52,577	7,690	7,428	667	9,611	8,879	2,090	1,283	17,113	38,226	36,048	73.1	68.6	14,077	7,282	6,113	6,993
	7 mos.	13,124	288,800	25,316	343,928	330,771	51,093	44,117	4,864	66,828	61,369	14,306	9,141	114,981	258,042	234,242	75.0	70.8	85,885	45,599	38,450	42,130
Atlanta & St. Andrews Bay	July	82	362	....	367	320	45	22	3	30	30	7	7	71	171	148	46.5	46.4	196	87	75	70
	7 mos.	82	2,513	5	2,561	2,427	303	259	19	200	202	47	49	512	1,195	1,105	46.6	45.5	1,366	610	522	487
Atlanta & West Point	July	93	235	37	318	292	46	39	7	61	61	13	17	144	291	267	91.5	91.2	27	21	—4	—2
	7 mos.	93	1,724	213	2,341	1,736	325	264	45	458	364	92	122	1,029	2,089	1,596	89.3	91.9	251	148	—27	—78
Western of Alabama	July	133	252	34	314	303	55	40	10	66	61	18	18	135	295	268	94.0	88.5	19	23	16	36
	7 mos.	133	1,966	205	2,436	1,850	354	301	53	500	421	127	133	962	2,098	1,691	86.1	91.4	338	222	195	76
Atlantic Coast Line	July	5,293	9,736	1,431	12,032	11,365	2,358	2,423	160	3,200	2,429	607	432	5,347	11,985	10,766	99.6	94.7	46	Cr. 450	361	634
	7 mos.	5,288	81,935	11,262	101,353	94,889	17,919	16,465	1,116	21,089	20,336	4,226	3,067	38,413	85,058	78,631	83.9	82.9	16,295	8,000	5,794	6,815
Charleston & Western Carolina	July	343	491	....	501	545	162	134	14	108	101	42	20	172	479	426	95.6	78.0	22	10	29	79
	7 mos.	343	4,449	....	4,521	3,613	1,071	947	124	775	748	295	141	1,265	3,366	2,967	74.5	82.1	1,154	595	557	343
Baltimore & Ohio	July	6,020	28,793	1,705	32,921	38,342	3,317	4,659	408	6,907	8,228	1,067	957	15,488	28,588	30,228	86.8	78.8	4,333	898	2,089	3,551
	7 mos.	6,020	240,177	11,173	268,458	241,551	29,745	28,432	3,506	58,765	46,629	7,259	6,924	111,019	219,930	190,401	81.9	78.8	48,528	16,708	22,300	24,259
Staten Island Rapid Transit	July	29	160	59	222	218	45	48	12	30	23	2	2	136	243	238	109.7	109.4	—22	42	—92	—78
	7 mos.	29	1,334	412	1,773	1,723	359	307	82	205	172	12	12	975	1,780	1,648	100.4	95.6	—7	288	—481	—364
Bangor & Aroostook	July	602	900	31	974	866	201	200	17	219	197	103	28	315	835	747	85.7	86.3	139	124	282	277
	7 mos.	602	10,025	194	10,563	8,303	2,153	1,900	115	1,761	1,648	711	196	2,694	7,287	6,374	69.0	76.8	3,275	1,387	2,483	1,705
Bessemer & Lake Erie	July	208	587	....	655	2,968	255	162	18	387	588	139	30	333	1,112	1,380	170.0	46.5	—457	Cr. 78	28	920
	7 mos.	208	13,743	1	13,957	13,989	1,996	1,195	323	5,924	3,931	975	207	3,158	12,001	8,905	86.0	63.7	1,956	2,095	2,553	3,766
Boston & Maine	July	1,573	5,127	1,004	6,923	7,397	930	900	158	911	840	220	144	3,295	5,676	5,324	82.0	72.0	1,247	377	349	787
	7 mos.	1,573	39,883	6,046	51,602	49,068	7,213	7,039	1,027	6,623	6,353	1,483	1,006	23,518	41,286	37,689	80.0	76.8	10,317	3,495	2,787	3,373
Canadian Pacific Lines in Maine	July	234	314	60	407	343	125	96	12	125	100	17	9	178	454	399	111.4	116.5	—46	31	—123	—118
	7 mos.	234	4,328	300	4,816	4,434	847	736	128	936	865	122	58	1,881	3,831	3,596	79.5	81.1	985	226	288	356
Carolina & Northwestern	July	284	247	....	250	222	73	75	9	16	13	7	4	74	179	177	71.7	79.4	71	6	26	12
	7 mos.	284	2,224	....	2,266	1,867	452	455	46	125	113	49	30	556	1,251	1,168	55.2	62.6	1,015	226	438	272
Central of Georgia	July	1,764	3,227	184	3,632	3,354	603	610	49	618	610	155	171	1,377	2,965	2,912	81.7	86.8	666	250	379	237
	7 mos.	1,764	23,137	1,120	26,219	25,016	4,019	3,926	317	4,086	4,132	1,070	1,212	9,991	20,692	19,842	78.9	79.3	5,527	1,717	3,353	3,104
Central of New Jersey	July	612	3,902	540	4,743	4,732	592	666	98	823	787	179	72	2,177	3,698	3,698	82.2	78.1	845	428	244	473
	7 mos.	612	29,469	3,440	35,315	32,758	4,484	4,204	671	6,323	5,734	1,214	526	15,173	28,037	25,483	79.4	77.8	7,278	3,538	2,395	2,816
Central Vermont	July	397	742	93	1,069	935	269	228	16	103	108	11	19	390	819	758	76.6	81.1	250	50	128	6
	7 mos.	397	5,701	434	6,870	6,458	1,342	1,246	112	802	735	76	124	2,775	5,309	4,830	77.3	74.8	1,561	342	433	531
Chesapeake & Ohio	July	5,132	28,000	617	30,536	30,495	3,710	3,667	416	5,910	5,218	1,597	773	10,762	22,779	20,784	74.6	68.2	7,757	3,722	4,282	5,483
	7 mos.	5,132	219,346	4,184	235,454	208,969	26,564	24,801	2,790	39,998	35,805	10,730	5,419	78,542	160,890	141,166	68.3	67.6	74,564	35,900	41,937	38,808
Chicago & Eastern Illinois	July	868	2,652	260	3,136	2,907	416	385	29	489	481	136	139	1,183	2,417	2,296	77.1	79.0	719	240	337	348
	7 mos.	868	18,414	1,538	21,566	19,532	2,534	2,552	210	3,405	3,354	936	951	8,266	16,512	15,616	76.6	80.0	5,054	1,620	2,398	2,237
Chicago & Illinois Midland	July	121	536	....	560	616	69	64	6	121	90	24	29	147	408	394	72.9	64.0	152	79	62	90
	7 mos.	127	4,458	....	4,569	4,419	361	472	74	686	821	169	216	1,085	2,671	3,100	58.5	70.1	1,897	996	870	489
Chicago & North Western	July	7,825	12,270	1,719	15,692	16,951	2,773	2,591	313	3,127	2,777	893	381	7,404	14,544	14,189	92.7	83.7	1,148	1,181	—800	876
	7 mos.	7,834	88,927	10,079	110,394	110,460	18,949	17,397	2,150	23,235	20,071	6,175	2,679	52,984	103,840	96,355	94.1	87.2	6,554	8,298	—6,471	1,653
Chicago, Burlington & Quincy	July	8,805	17,422	2,109	21,712	20,968	4,197	3,931	675	3,444	3,310	909	540	8,629	17,751	16,633	81.8	79.3	3,961	1,890	1,624	1,985
	7 mos.	8,805	117,142	11,359	143,708	137,252	20,850	21,244	3,155	24,522	23,535	6,302	3,921	57,946	113,617	108,460	79.1	79.0	30,091	16,205	13,207	13,160
Chicago Great Western	July	1,470	2,708	54	2,911	2,856	450	451	382	490	457	122	111	916	2,035	1,965	69.9	68.8	875	339	350	347
	7 mos.	1,470	19,085	122	20,311	19,421	3,053	3,015	288	3,272	2,885	855	818	6,208	13,884	13,187	68.3	67.9	6,427	2,565	2,556	2,428
Chicago, Mil., St. Paul & Pacific	July	10,641	16,597	1,936	20,606	19,256	3,817	4,205	392	3,169	3,396	928	525	8,347	17,056	16,912	82.8	87.8	3,549	1,604	1,247	437
	7 mos.	10,641	118,205	9,774	142,727	134,493	24,264	24,380	2,814	27,948	27,003	6,419	3,709	58,103	122,361	114,734	85.7	85.3	20,366	10,926	5,590	6,470
Chicago, Rock Island & Pacific	July	7,597	14,763	1,625	17,951	17,093	2,714	2,552	259	2,954	2,516	582	518	6,395	13,450	12,424	74.9	72.7	4,502	1,339	1,985	1,893
	7 mos.	7,597	96,647	10,126	116,786	109,639	15,514	14,784	1,711	19,563	18,114	4,043	3,710	43,942	88,951	82,620	76.2	75.4	27,834	10,805	11,866	11,197
Chic., St. Paul, Minn. & Omaha	July	1,616	2,344	165	2,731	2,652	430	494	32	346	345	78	68	1,298	2,285	2,341	83.7	88.3	446	184	38	—169
	7 mos.	1,616	16,143	945	18,595	18,255	2,914	2,986	305	2,967	2,765	548	485	9,427	16,736	16,171	90.0	88.6	1,860	1,314	—1,525	—1,253
Clinchfield Railroad	July	293	1,536	....	1,548	1,500	240	272	20	409	280	96	55	439	1,196	1,073	77.2	71.5	352	199	323	342
	7 mos.	293	14,408	....	14,492	10,388	1,941	1,553	136	2,641	1,844	665	397	3,292	8,653	6,222	59.7	59.9	5,840	1,387	5,291	3,655
Colorado & Southern	July	718	831	92	1,060	1,329	271	254	18	181	167	42	34	464	1,020	1,016	96.3	76.4	39	114	—46	114
	7 mos.	718	7,246	470	8,666	8,695	1,329	1,222	115	1,515	1,155	297	225	3,454	7,005	6,193	80.8	71.2	1,661	1,048	453	1,016
Ft. Worth & Denver	July	1,362	1,386	214	1,789	1,739	301	255	29	304	230	45	70	750	1,542	1,335	86.2	76.7	247	21	71	162
	7 mos.	1,362	9,868	1,059	12,165	12,303	1,902	2,431	238	1,962	1,821	313	471	4,859	9,968	9,837	81.9	80.0	2,196	540	764	1,008

REVENUES AND EXPENSES OF RAILWAYS

(Dollar figures are stated in thousands; i.e., with last three digits omitted)

MONTH OF JULY AND SEVEN MONTHS OF CALENDAR YEAR 1956

Name of Road		Average mileage operated during period	Operating Revenues: Freight	Pass.	Total (inc. misc.) 1956	Total (inc. misc.) 1955	Operating Expenses: Maint. Way and Structures: Total 1956	Total 1955	Deprec. and Retirements	Maint. Equipment: Total 1956	Total 1955	Deprec. and Retirements	Traffic	Transportation	Total 1956	Total 1955	Operating ratio 1956	Operating ratio 1955	Net from railway operation	Railway tax accruals	Net railway operating income 1956	Net railway operating income 1955
Colorado & Wyoming	July	40	34	....	133	298	10	27	1	19	32	12	1	16	60	179	45.3	60.0	72	12	5	52
	7 mos.	40	1,311	....	2,156	2,066	176	255	16	216	227	77	11	771	1,271	1,323	58.9	64.0	885	465	341	319
Delaware & Hudson	July	792	3,707	184	4,041	4,085	536	374	53	704	685	172	97	1,572	3,170	2,858	78.4	69.9	871	360	663	903
	7 mos.	792	30,693	1,068	32,774	29,636	3,665	3,556	388	4,886	5,202	1,215	667	11,101	22,155	21,178	67.6	71.5	10,619	5,121	6,060	5,335
Delaware, Lackawanna & Western	July	962	5,057	848	6,486	6,703	877	830	137	1,014	1,029	328	194	3,564	6,003	5,474	92.6	81.7	482	455	—33	605
	7 mos.	962	41,028	5,630	51,247	47,377	5,829	5,536	958	7,579	7,167	2,281	1,377	25,068	42,388	37,967	82.7	80.1	8,860	3,124	4,706	4,306
Denver & Rio Grande Western	July	2,155	5,133	386	5,753	5,941	909	849	94	918	877	284	199	1,989	4,386	4,090	76.2	68.8	1,368	497	876	982
	7 mos.	2,155	41,006	1,735	44,183	42,550	5,549	5,081	669	6,724	6,508	1,957	1,480	13,592	29,480	27,546	66.7	64.7	14,703	7,129	7,938	7,821
Detroit & Toledo Shore Line	July	50	495	....	546	596	75	93	3	54	63	21	18	199	364	377	66.5	63.3	183	63	44	56
	7 mos.	50	4,573	....	4,938	4,917	574	577	25	472	459	146	129	1,539	2,836	2,678	57.4	54.5	2,102	749	539	620
Detroit, Toledo & Ironton	July	464	1,368	....	1,404	1,749	197	297	37	372	340	92	55	400	1,104	1,219	78.6	69.7	300	141	195	395
	7 mos.	464	11,719	....	12,194	12,073	1,961	1,848	227	2,427	1,785	640	383	3,136	8,459	7,360	69.4	61.0	3,735	1,525	2,004	2,701
Duluth, Missabe & Iron Range	July	569	593	1	744	7,570	330	412	87	318	574	135	9	592	1,382	2,836	185.8	37.5	—638	Cr. 68	—591	2,043
	7 mos.	569	18,475	4	21,572	25,749	3,047	2,629	636	4,510	3,814	919	72	7,870	16,546	14,994	76.7	58.2	5,026	3,054	1,890	4,854
Duluth, South Shore & Atlantic	July	544	667	4	711	720	164	143	10	127	109	25	31	236	580	523	81.6	72.6	131	43	63	138
	7 mos.	547	4,499	26	4,742	4,426	933	930	70	914	914	169	207	1,589	3,815	3,606	80.5	81.5	927	250	553	473
Duluth, Winnipeg & Pacific	July	175	453	1	460	486	93	70	4	81	63	2	6	240	428	363	93.1	74.7	32	42	—108	14
	7 mos.	175	4,014	5	4,060	3,360	539	441	31	540	474	15	43	1,773	2,955	2,509	72.8	74.7	1,105	322	181	75
Elgin, Joliet & Eastern	July	236	1,313	....	1,697	3,925	239	253	26	509	545	111	38	811	1,804	2,450	106.3	62.4	—107	Cr. 44	—155	503
	7 mos.	236	24,907	....	30,254	28,450	1,886	1,642	203	5,737	3,723	759	255	11,246	20,539	16,693	67.9	58.7	9,715	4,338	2,420	4,027
Erie	July	2,225	11,022	669	12,708	13,212	2,140	1,956	217	2,139	2,073	520	387	6,383	11,762	10,798	92.6	81.7	946	Cr. 383	679	857
	7 mos.	2,225	88,710	4,150	100,091	90,859	12,202	11,267	1,539	15,188	14,647	3,603	2,726	44,308	79,561	72,293	79.5	79.6	20,530	7,368	8,226	7,674
Florida East Coast	July	571	1,815	443	2,433	1,923	274	251	46	362	341	99	83	975	1,843	1,673	75.8	87.0	590	135	295	185
	7 mos.	571	17,456	3,856	23,320	21,634	3,048	2,747	321	4,028	3,609	694	595	8,337	17,197	15,671	73.7	72.4	6,124	1,475	2,773	2,832
Georgia Railroad	July	321	611	22	704	674	118	102	11	154	125	33	38	316	662	596	94.0	88.4	42	41	42	81
	7 mos.	321	4,473	119	5,201	3,744	901	699	77	998	769	228	268	2,180	4,608	3,597	88.6	96.1	593	287	563	185
Georgia & Florida	July	332	263	....	269	326	78	86	4	34	30	8	22	87	238	237	88.5	72.6	31	16	—7	40
	7 mos.	332	2,050	....	2,090	1,942	635	530	25	264	212	57	144	612	1,776	1,523	85.0	78.4	314	117	43	156
Grand Trunk Western	July	951	4,122	287	4,850	5,039	806	653	91	962	706	94	91	2,559	4,630	3,951	95.5	78.4	220	387	—659	223
	7 mos.	951	32,572	1,615	37,040	35,882	4,779	4,040	421	6,687	5,180	658	610	18,047	31,589	26,837	85.3	74.8	5,451	2,621	—953	3,696
Great Northern	July	8,286	18,746	1,194	21,062	24,147	5,380	4,822	529	3,691	3,327	756	469	7,692	18,274	17,077	86.8	70.7	2,733	433	1,639	3,115
	7 mos.	8,285	135,133	6,035	150,805	143,818	30,815	28,640	2,514	27,782	23,313	5,266	3,441	52,469	120,970	109,106	80.2	75.9	29,835	14,718	12,253	13,858
Green Bay & Western	July	224	349	....	367	366	86	95	4	49	38	9	24	113	290	278	79.0	76.1	77	42	10	15
	7 mos.	224	2,532	....	2,598	2,579	592	456	29	320	264	64	163	788	1,995	1,731	76.8	67.6	603	283	128	244
Gulf, Mobile & Ohio	July	2,757	6,020	347	6,816	6,727	1,119	1,071	87	1,248	1,248	284	293	2,281	5,284	5,010	77.5	74.5	1,532	577	600	688
	7 mos.	2,757	42,592	2,265	48,097	48,258	7,292	7,350	535	9,266	9,030	1,986	2,027	15,446	36,607	35,012	76.1	72.6	11,489	4,799	4,067	5,816
I—																						
Illinois Central	July	6,503	19,418	1,907	23,313	23,993	3,410	3,961	365	3,888	3,453	798	579	8,528	17,515	17,106	75.1	71.3	5,797	3,029	2,255	2,967
	7 mos.	6,528	140,522	12,537	169,374	166,113	26,004	24,736	2,961	28,883	27,279	5,538	4,082	61,338	127,883	120,996	75.5	72.8	41,491	21,921	15,498	17,456
Illinois Terminal	July	355	872	29	1,040	1,002	161	165	26	166	177	39	46	381	812	804	78.1	80.3	227	104	81	61
	7 mos.	355	6,326	220	7,452	6,651	919	944	158	1,299	1,121	289	327	2,729	5,744	5,349	77.1	80.4	1,708	593	811	463
Kansas City Southern	July	891	3,474	122	3,930	3,805	407	369	35	499	524	95	98	1,156	2,298	2,217	58.5	58.3	1,633	754	656	640
	7 mos.	891	24,592	710	27,662	25,882	2,668	2,489	306	3,399	3,177	648	702	8,149	15,857	14,597	57.3	56.4	11,805	5,455	4,634	4,653
Kansas, Oklahoma & Gulf	July	327	388	....	389	425	108	46	7	30	25	11	30	99	290	223	74.7	52.6	99	46	25	84
	7 mos.	327	3,116	....	3,127	2,818	582	394	66	215	203	79	213	745	1,914	1,662	61.2	59.0	1,214	467	502	424
Lake Superior & Ishpeming	July	149	80	....	97	872	71	66	7	60	53	17	2	64	214	278	220.8	31.6	—117	Cr. 94	....	356
	7 mos.	149	1,853	....	2,317	2,707	384	374	49	500	431	120	15	587	1,600	1,503	69.1	55.5	717	416	428	698
Lehigh & Hudson River	July	96	260	....	261	264	34	34	2	31	27	8	16	97	188	178	72.0	67.3	73	38	17	28
	7 mos.	96	1,918	....	1,920	1,889	245	242	16	233	204	58	111	680	1,364	1,247	71.0	66.0	556	237	103	211
Lehigh & New England	July	178	649	....	660	646	45	62	7	171	180	41	20	230	509	504	77.1	78.0	151	41	217	99
	7 mos.	178	4,527	....	4,577	4,311	495	514	45	1,292	1,152	287	140	1,524	3,741	3,434	81.7	79.6	836	278	1,400	597
Lehigh Valley	July	1,147	4,680	284	5,199	5,627	772	834	99	882	951	216	140	2,574	4,615	4,710	88.8	83.7	584	462	89	393
	7 mos.	1,149	37,003	1,820	40,835	39,027	5,289	5,088	667	6,816	6,811	1,327	1,042	18,590	33,485	31,434	82.0	80.5	7,349	3,059	3,409	5,380
Litchfield & Madison	July	44	301	....	304	308	15	11	1	26	25	6	41	65	167	155	54.9	50.2	137	56	40	53
	7 mos.	44	2,235	....	2,265	2,015	81	89	5	173	178	40	296	443	1,131	1,072	29.9	53.2	1,134	473	352	319
Long Island	July	351	1,145	4,423	5,734	5,463	720	663	106	1,000	978	165	32	2,562	4,572	4,292	79.7	78.6	1,163	342	569	542
	7 mos.	351	8,204	27,983	37,361	35,184	5,423	4,646	797	7,438	6,663	1,136	185	18,584	32,914	29,812	88.1	84.7	4,447	2,384	324	1,122
Louisiana & Arkansas	July	746	2,141	62	2,315	2,376	265	255	18	319	285	94	81	685	1,433	1,304	61.9	54.9	882	345	441	515
	7 mos.	749	15,020	368	16,115	15,897	1,679	1,589	152	2,100	1,857	656	569	4,693	9,623	8,708	59.7	54.8	6,492	2,573	3,195	3,495

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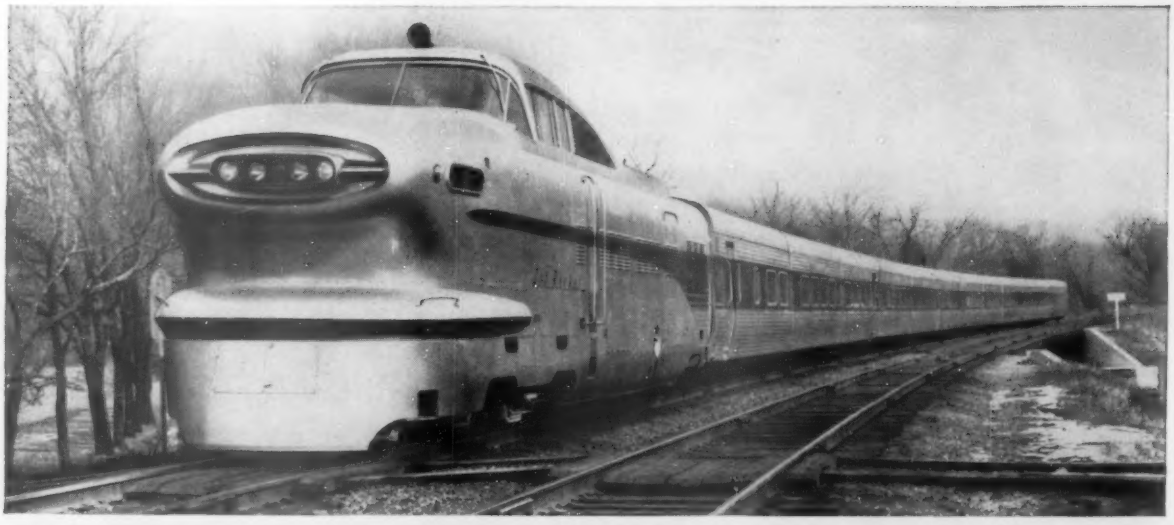

New train is sleek . . . low . . . light. Jet Rocket highballs along Rock Island's tracks. Gleaming stainless steel body and strong USS T-1 alloy steel underframe both contain nickel and contribute to a safer and lighter, modern train.

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REVENUES AND EXPENSES OF RAILWAYS

(Dollar figures are stated in thousands; i.e., with last three digits omitted)

MONTH OF JULY AND SEVEN MONTHS OF CALENDAR YEAR 1956

Name of Road		Average mileage operated during period	Operating Revenues: Freight	Pass.	Total (inc. misc.) 1956	Total (inc. misc.) 1955	Operating Expenses: Maint. Way and Structures: Total 1956	Total 1955	Deprec. and Retirements	Maint. Equipment: Total 1956	Total 1955	Deprec. and Retirements	Traffic	Transportation	Total 1956	Total 1955	Operating ratio 1956	Operating ratio 1955	Net from railway operations	Railway tax accruals	Net railway operating income 1956	Net railway operating income 1955
Louisville & Nashville	July	4,732	13,587	982	15,626	16,388	2,541	2,432	314	3,645	3,574	830	374	6,307	13,586	13,331	86.9	81.3	2,040	1,537	1,724	2,308
	7 mos.	4,732	107,130	5,882	121,580	91,289	17,142	13,217	1,736	25,527	20,634	5,865	2,657	45,419	95,728	73,975	78.7	81.0	25,852	17,653	16,120	14,227
Maine Central	July	944	1,717	132	2,017	1,902	464	420	29	322	331	78	26	775	1,696	1,594	84.1	83.8	321	188	135	124
	7 mos.	944	14,468	656	16,141	14,564	3,033	2,890	185	2,610	2,369	539	165	5,726	12,301	11,215	76.2	77.0	3,841	1,788	1,569	1,325
Minneapolis & St. Louis	July	1,397	1,679	14	1,756	1,725	266	268	30	285	252	81	90	592	1,365	1,314	77.7	76.2	391	205	178	175
	7 mos.	1,397	11,958	33	12,436	11,494	1,740	1,974	192	2,029	1,934	539	686	4,255	9,677	9,374	77.8	81.6	2,759	1,604	1,084	876
Minneapolis, Northfield & Southern	July	77	319	....	338	340	27	30	2	32	26	10	26	78	198	173	58.7	51.1	139	65	52	62
	7 mos.	77	2,406	....	2,562	2,471	148	298	14	237	196	73	171	573	1,330	1,309	51.9	53.0	1,232	613	495	461
Minn., St. Paul & S. Ste. Marie	July	3,224	3,485	86	3,768	3,895	1,090	741	41	616	629	121	105	1,392	3,371	2,861	89.5	73.5	396	189	30	566
	7 mos.	3,224	24,105	576	25,915	21,649	5,486	4,850	475	4,614	4,198	850	659	9,580	21,403	18,617	82.6	86.0	4,513	2,205	1,548	1,420
Missouri-Illinois	July	172	502	....	506	469	73	68	1	74	77	30	11	118	285	291	56.4	62.0	220	120	117	108
	7 mos.	172	3,233	....	3,257	3,319	443	410	28	580	529	211	76	805	1,973	1,920	60.6	57.8	1,284	709	697	849
Missouri-Kansas-Texas Lines	July	3,241	5,306	261	6,072	6,618	882	908	96	978	1,028	257	275	2,528	4,991	4,999	82.2	75.5	1,082	456	295	612
	7 mos.	3,241	37,867	1,614	43,288	42,347	6,143	5,937	700	6,942	6,258	1,796	1,925	17,271	34,578	32,530	79.9	76.8	8,710	3,146	2,988	3,861
Missouri Pacific	July	9,701	22,902	1,238	26,346	26,324	4,210	4,488	343	4,452	4,456	993	672	9,317	19,628	19,665	74.5	74.7	6,718	2,301	3,697	3,984
	7 mos.	9,700	154,935	6,905	177,420	171,121	27,340	28,643	2,366	30,868	31,439	7,005	4,669	64,872	134,617	132,460	75.9	77.4	42,803	13,872	22,809	21,901
Monon	July	541	1,596	66	1,808	1,790	292	268	20	302	264	73	100	690	1,501	1,414	83.0	79.0	308	115	99	142
	7 mos.	541	11,585	469	13,110	12,592	2,241	1,928	135	2,055	1,881	512	720	4,880	10,769	9,754	82.1	77.5	2,340	851	819	1,131
Monongahela	July	177	431	....	436	442	69	63	16	59	54	11	1	157	294	277	67.4	62.6	142	28	7	32
	7 mos.	177	3,627	....	3,648	3,336	489	432	117	402	389	81	5	1,267	2,235	2,086	61.3	62.5	1,413	118	473	260
Nashville, Chatt. & St. Louis	July	1,043	2,271	139	2,667	2,715	411	503	48	431	403	138	121	1,165	2,247	2,282	84.3	84.1	420	255	171	299
	7 mos.	1,043	17,926	896	20,992	15,051	3,514	2,679	338	3,066	2,668	970	863	8,227	16,521	13,192	78.7	87.6	4,471	2,408	1,919	913
New York Central	July	10,613	40,990	8,866	56,616	62,796	5,173	8,541	1,139	11,020	10,561	2,286	1,178	26,959	47,505	50,149	83.9	79.9	9,111	5,476	2,441	5,419
	7 mos.	10,613	342,285	58,373	453,709	430,874	48,943	51,022	8,071	78,820	72,389	15,751	8,419	206,761	367,070	340,577	80.9	79.0	86,639	38,574	34,404	40,630
Pittsburgh & Lake Erie	July	221	1,144	58	1,310	3,564	281	401	50	728	904	270	80	794	2,090	2,598	159.5	72.9	—779	343	—83	1,129
	7 mos.	221	22,247	435	24,074	23,749	3,065	2,814	520	6,386	5,779	1,891	527	8,677	20,145	18,247	83.7	76.8	3,929	5,797	5,682	7,444
New York, Chicago & St. Louis	July	2,178	11,385	170	12,007	13,481	1,624	1,473	152	2,334	2,138	382	359	4,903	9,724	9,347	81.0	69.3	2,283	988	769	1,716
	7 mos.	2,178	95,413	1,062	99,568	90,161	11,548	10,195	1,016	16,527	14,523	2,668	2,465	36,578	70,400	62,101	70.7	68.9	29,168	13,822	11,794	11,795
New York, New Haven & Hartford	July	1,769	6,855	4,465	12,596	14,357	1,448	1,507	310	1,383	1,793	38	244	5,956	9,924	11,174	78.8	77.8	2,672	913	364	928
	7 mos.	1,769	53,701	29,240	93,327	90,812	10,968	10,448	1,895	15,507	13,047	2,451	1,874	42,738	77,540	71,802	83.1	79.1	15,788	6,643	—500	7,915
New York Connecting	July	21	214	....	241	298	155	133	25	14	22	....	....	80	252	258	104.8	86.6	—12	94	—117	—48
	7 mos.	21	2,455	....	2,654	2,634	704	633	177	89	144	....	....	623	1,441	1,452	54.3	55.1	1,214	667	491	537
New York, Ontario & Western	July	541	412	....	427	429	129	122	17	86	87	22	33	277	561	511	131.4	119.1	—134	44	—254	—202
	7 mos.	541	3,277	....	3,380	3,243	795	774	129	639	616	156	195	1,890	3,748	3,519	110.9	108.5	—367	297	—1,242	—1,082
New York, Susquehanna & Western	July	120	306	41	366	401	46	55	6	58	56	13	10	200	345	350	94.2	87.2	21	11	—24	—28
	7 mos.	120	2,612	309	3,060	3,560	362	376	40	399	417	89	67	1,398	2,456	2,549	80.3	71.6	603	181	145	280
Norfolk & Western	July	2,132	15,740	345	16,951	17,416	2,658	2,075	301	3,718	3,485	768	353	5,427	12,963	11,383	76.5	65.4	3,989	2,688	2,163	3,122
	7 mos.	2,127	126,994	2,066	135,264	114,471	18,188	15,047	2,238	29,962	23,868	5,099	2,515	40,288	96,236	78,601	71.1	68.7	39,028	25,067	20,503	18,879
Norfolk Southern	July	604	850	....	861	757	187	179	13	122	121	30	51	261	675	623	78.4	82.3	186	98	61	41
	7 mos.	604	5,931	....	6,022	5,803	1,324	1,244	90	854	869	208	342	1,867	4,812	4,522	79.9	77.9	1,210	561	390	403
Northern Pacific	July	6,865	13,697	825	15,667	15,523	2,984	2,350	411	2,486	2,527	586	358	6,065	12,749	12,032	81.4	77.5	2,918	1,662	1,440	1,726
	7 mos.	6,865	93,483	4,157	105,065	100,308	15,691	14,292	1,986	20,024	18,031	4,056	2,713	42,463	86,949	80,594	82.8	80.3	18,116	10,715	8,449	9,934
Northwestern Pacific	July	329	1,157	9	1,188	646	272	524	17	120	107	4	6	390	814	933	68.5	144.4	374	135	58	—258
	7 mos.	329	7,280	18	7,384	8,112	1,452	2,403	120	715	723	28	46	2,376	4,764	5,679	64.5	70.0	2,620	887	456	421
Pennsylvania	July	10,006	53,421	10,382	71,095	79,801	7,637	8,958	1,426	13,776	17,325	2,887	1,339	33,651	60,200	65,123	84.7	81.6	10,895	5,319	2,488	6,401
	7 mos.	10,006	443,126	72,263	570,735	526,581	60,831	56,892	9,945	116,107	109,910	19,984	9,745	254,977	469,949	428,915	82.3	81.5	100,787	40,819	38,772	44,388
Penn-Reading Seashore Lines	July	358	624	285	936	914	253	184	103	135	110	26	12	507	946	890	101.0	97.3	—10	83	—255	—220
	7 mos.	358	4,471	920	5,539	5,220	1,509	1,417	408	865	777	172	80	3,408	6,144	5,798	110.9	111.1	—604	585	—2,260	—2,047
Piedmont & Northern	July	128	390	....	398	463	47	49	4	26	31	9	28	82	214	215	53.8	46.4	104	97	47	82
	7 mos.	128	3,235	....	3,300	3,173	323	322	32	211	198	74	196	582	1,527	1,440	46.3	45.4	1,773	890	565	589
Pittsburgh & West Virginia	July	132	535	....	538	723	79	117	25	123	136	38	34	171	453	536	84.2	74.1	85	33	63	111
	7 mos.	132	5,263	....	5,287	4,723	725	743	177	959	863	260	463	1,425	3,933	3,541	74.4	75.0	1,354	683	753	709
Reading	July	1,304	7,858	541	9,020	9,046	1,381	1,423	184	1,836	1,777	427	183	4,111	7,995	7,431	88.6	82.1	1,024	361	709	1,039
	7 mos.	1,305	69,681	4,083	78,584	66,500	10,009	8,455	1,350	14,871	12,730	2,983	1,278	31,045	60,579	51,518	77.1	77.5	18,004	8,058	8,285	8,155
Richmond, Fredericksburg & Potomac	July	118	1,299	566	2,109	2,280	213	284	24	323	315	67	25	738	1,439	1,479	68.2	64.8	670	367	219	281
	7 mos.	118	10,754	3,549	16,397	16,114	1,617	2,020	172	2,227	2,280	470	175	5,368	10,408	10,561	63.5	65.5	5,989	3,074	2,064	1,747

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REVENUES AND EXPENSES OF RAILWAYS

(Dollar figures are stated in thousands; i.e., with last three digits omitted)

MONTH OF JULY AND SEVEN MONTHS OF CALENDAR YEAR 1956

Name of Road		Average mileage operated during period	Operating Revenues: Freight	Pass.	Total (inc. misc.) 1956	Total (inc. misc.) 1955	Operating Expenses: Maint. Way and Structures: Total 1956	Total 1955	Deprec. and Retirements	Maint. Equipment: Total 1956	Total 1955	Deprec. and Retirements	Traffic	Transportation	Total 1956	Total 1955	Operating ratio 1956	Operating ratio 1955	Net from railway operation	Railway tax accruals	Net railway operating income 1956	Net railway operating income 1955
Rutland	July	391	365	....	399	387	92	76	9	45	48	16	27	156	348	323	87.1	83.6	51	28	8	20
	7 mos.	391	2,786	....	3,018	2,694	623	530	69	363	370	104	192	1,084	2,463	2,279	81.6	84.6	555	192	208	88
Sacramento Northern	July	347	99	....	107	190	58	48	9	14	12	6	2	66	118	141	109.9	74.3	—11	17	—34	18
	7 mos.	347	1,037	1	1,099	1,365	545	402	32	106	103	39	15	478	1,243	1,069	113.0	78.3	—143	107	—348	75
St. Louis-San Francisco	July	4,610	9,051	437	10,186	9,721	1,634	1,493	164	1,729	1,835	564	414	4,179	8,540	7,946	83.8	81.7	1,646	759	918	981
	7 mos.	4,610	65,012	2,596	72,679	70,462	10,908	10,284	1,184	12,007	12,103	3,847	2,812	27,578	57,424	54,354	79.0	77.1	15,255	7,666	7,694	7,985
St. Louis, San Francisco & Texas	July	155	346	4	372	385	44	67	4	30	32	1	28	160	275	298	74.0	77.5	97	35	3	3
	7 mos.	155	2,630	23	2,816	2,831	300	382	37	245	223	8	192	1,072	1,897	1,969	67.4	69.6	919	310	176	194
St. Louis Southwestern Lines	July	1,561	5,246	24	5,433	5,740	688	740	63	722	595	151	190	1,730	3,512	3,315	64.6	57.8	1,922	877	779	868
	7 mos.	1,561	38,632	117	39,958	38,064	4,873	4,498	484	4,614	4,050	879	1,320	12,323	24,452	22,176	61.2	58.3	15,506	7,001	6,523	5,989
Savannah & Atlanta	July	144	306	1	319	280	51	41	2	56	41	19	14	88	220	184	69.0	66.0	99	29	65	45
	7 mos.	144	2,225	1	2,318	2,038	376	326	11	330	301	107	108	625	1,516	1,325	65.4	65.0	802	251	390	346
Seaboard Air Line	July	4,062	9,775	1,376	12,030	10,959	1,601	1,477	197	2,547	2,175	606	396	4,270	9,500	8,410	79.0	76.7	2,530	1,015	1,646	1,705
	7 mos.	4,062	81,234	8,370	97,302	90,217	13,734	13,990	1,372	17,868	16,200	4,133	2,758	32,089	70,876	65,189	72.8	72.3	26,426	10,510	14,159	14,019
Southern Ry	July	6,289	16,891	1,499	19,866	20,949	3,292	2,912	371	3,996	3,772	817	442	6,959	15,766	14,753	79.4	70.4	4,100	1,025	3,174	3,237
	7 mos.	6,289	140,313	8,645	160,282	159,815	21,839	19,787	2,086	29,013	26,673	5,696	3,104	49,798	111,333	103,871	69.5	65.0	48,949	21,432	25,413	25,665
Alabama Great Southern	July	326	1,156	76	1,339	1,669	209	228	33	280	288	60	36	478	1,094	1,117	81.7	66.9	246	102	137	301
	7 mos.	326	9,387	407	10,666	12,283	1,751	1,640	278	2,180	2,110	419	255	3,356	8,186	8,071	76.8	65.7	2,480	1,192	1,276	1,930
Cinn., New Orleans & Texas Pacific	July	337	2,876	182	3,242	3,600	555	565	61	632	616	146	84	900	2,357	2,330	72.7	64.7	885	479	518	715
	7 mos.	337	23,144	1,001	25,564	29,031	4,111	3,796	465	4,551	4,466	1,027	545	6,314	16,729	16,479	65.4	56.8	8,835	4,840	4,758	5,715
Georgia Southern & Florida	July	475	558	74	699	811	165	234	12	82	80	10	24	273	592	596	84.7	73.5	107	42	—86	20
	7 mos.	475	5,073	423	6,007	6,341	1,561	1,804	75	604	548	68	184	1,865	4,580	4,814	76.2	75.9	1,428	300	—4	—199
New Orleans & Northeastern	July	204	1,085	49	1,202	1,089	186	164	21	164	130	43	22	229	665	594	55.3	54.6	537	335	197	173
	7 mos.	204	7,041	285	7,847	7,671	1,138	1,164	148	1,102	961	300	156	1,626	4,473	4,245	57.0	55.3	3,373	2,130	1,282	1,285
Southern Pacific	July	8,103	40,011	3,534	46,514	46,309	5,818	5,986	482	10,460	9,572	2,153	841	19,340	38,787	37,526	83.4	81.0	7,727	2,901	2,588	3,627
	7 mos.	8,115	275,297	18,604	311,720	304,254	38,593	37,026	3,358	67,066	62,363	14,176	6,383	124,810	252,502	236,790	81.0	77.8	59,218	24,753	25,365	30,303
Texas & New Orleans	July	4,298	10,251	533	11,473	11,235	2,071	2,313	168	1,636	1,716	198	299	4,340	8,971	8,962	78.2	79.8	2,502	987	410	430
	7 mos.	4,312	73,855	2,952	81,540	78,694	14,984	13,929	1,250	11,874	10,541	1,319	2,052	29,382	62,678	57,303	76.9	72.8	18,862	6,729	4,628	5,414
Spokane International	July	150	270	....	280	315	53	52	2	30	27	10	6	79	181	175	64.6	55.3	99	19	41	65
	7 mos.	150	2,044	....	2,109	2,072	482	336	18	202	191	67	43	570	1,393	1,144	66.0	55.2	717	238	266	412
Spokane, Portland & Seattle	July	947	2,763	124	3,055	2,723	468	370	51	434	386	114	29	970	2,014	1,786	65.9	65.6	1,041	339	505	459
	7 mos.	947	17,447	590	19,184	18,312	2,748	2,640	362	3,028	2,673	766	224	6,578	13,351	12,318	69.6	67.3	5,833	1,768	3,264	3,144
Tennessee Central	July	286	394	5	410	373	78	58	7	61	50	22	16	128	310	278	75.8	74.6	99	24	36	36
	7 mos.	286	2,978	47	3,092	2,959	566	496	39	483	421	145	110	911	2,269	2,161	73.4	73.0	823	174	328	249
Texas & Pacific	July	1,831	5,458	456	6,479	6,641	1,118	1,049	111	1,160	1,108	255	208	2,402	5,250	4,946	81.0	74.5	1,229	403	409	815
	7 mos.	1,831	41,406	2,298	47,586	46,254	7,640	7,123	693	7,379	7,030	1,782	1,466	16,680	35,653	33,211	74.9	71.8	11,933	3,674	5,467	5,557
Texas Mexican	July	161	237	....	263	241	54	46	5	31	31	10	11	72	188	168	71.4	69.7	75	30	16	17
	7 mos.	161	1,742	....	1,900	1,823	360	330	39	219	206	69	74	489	1,277	1,188	67.2	65.2	622	253	161	185
Toledo, Peoria & Western	July	239	551	....	558	583	88	103	5	41	56	12	53	143	364	387	65.2	66.4	194	79	56	53
	7 mos.	239	4,482	1	4,544	4,043	697	592	44	341	395	82	367	1,085	2,749	2,579	60.5	63.8	1,795	783	588	434
Union Pacific	July	9,799	35,778	3,332	42,511	42,545	5,654	5,971	487	7,043	7,625	1,711	1,064	14,651	30,774	32,012	72.4	75.2	11,737	5,994	3,116	3,413
	7 mos.	9,803	248,396	16,851	285,807	280,884	40,417	39,537	3,428	53,942	52,121	11,881	8,057	98,226	216,045	209,163	75.6	74.5	69,761	37,043	21,370	22,572
Virginian	July	611	3,947	....	4,144	3,152	532	429	63	659	655	205	53	886	2,234	1,935	53.9	61.4	1,911	1,033	1,008	777
	7 mos.	611	29,921	1	31,297	23,592	3,304	3,052	462	4,428	4,860	1,406	369	6,221	15,047	13,775	48.1	58.4	16,250	8,939	8,702	5,779
Wabash	July	2,393	8,718	489	9,959	10,154	1,116	1,203	82	1,320	1,320	398	335	4,307	7,511	7,363	75.4	72.5	2,448	815	958	1,121
	7 mos.	2,393	59,831	2,817	68,175	66,201	7,789	8,074	884	9,554	9,157	2,659	2,408	29,245	52,039	49,539	76.3	74.8	16,136	5,687	5,862	6,849
Ann Arbor	July	294	749	....	794	793	94	96	8	143	134	32	33	351	646	630	81.3	79.4	148	80	48	66
	7 mos.	294	5,435	3	5,537	5,312	639	666	49	994	933	203	215	2,429	4,433	4,233	80.1	79.7	1,104	558	362	443
Western Maryland	July	846	2,692	5	3,001	3,511	392	463	60	617	634	222	104	1,106	2,459	2,493	82.0	71.0	542	212	550	734
	7 mos.	847	27,513	32	29,412	25,896	4,086	3,727	314	5,241	4,346	1,545	780	9,305	21,144	18,132	71.9	70.0	8,269	4,145	5,724	5,256
Western Pacific	July	1,192	3,744	273	4,131	4,361	1,038	833	79	631	627	200	202	1,489	3,647	3,286	88.3	75.4	484	62	341	526
	7 mos.	1,192	28,410	1,421	30,660	29,841	5,892	5,563	584	4,435	4,474	1,388	1,471	10,324	24,011	22,388	78.3	75.0	6,649	2,167	3,916	3,843
Wisconsin Central	July	1,042	2,308	65	2,516	2,514	407	437	45	397	381	93	87	1,085	2,113	1,991	84.0	79.2	402	178	73	212
	7 mos.	1,042	17,595	268	18,890	17,171	3,050	2,714	288	2,935	2,650	634	564	7,514	14,937	13,344	79.1	77.7	3,953	1,168	1,630	1,822

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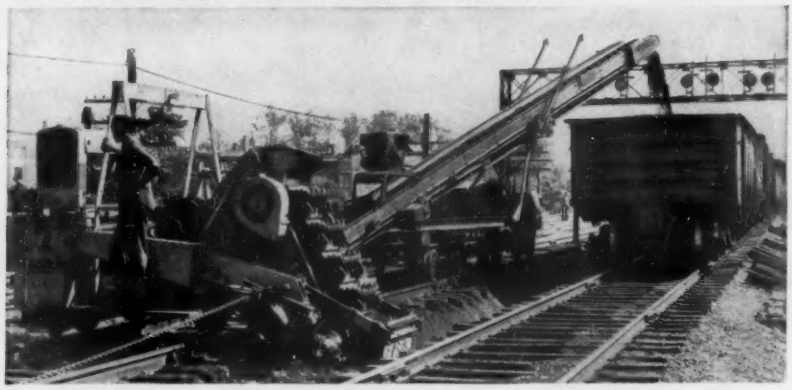

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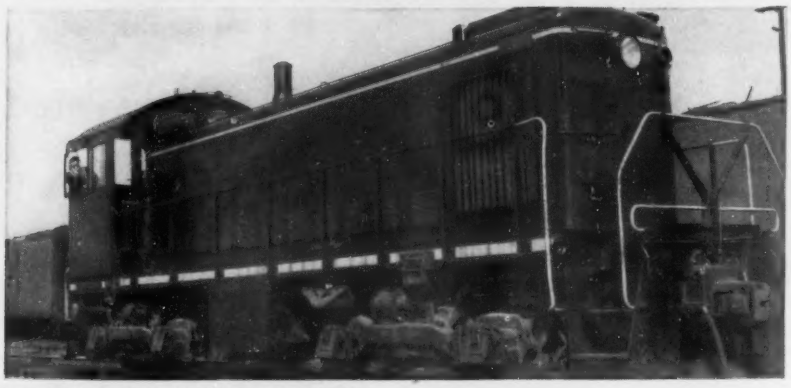

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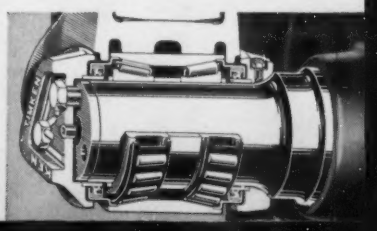
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